- 1908. -

ANNUAL REPORT

ON THE

HEALTH

OF THE

CITY OF HEREFORD,

BY

J. W. MILLER, M.D., D.P.H.,

MEDICAL OFFICER OF HEALTH; MEDICAL SUPERINTENDENT
OF THE CITY ISOLATION HOSPITALS; AND MEDICAL OFFICER
TO THE EDUCATION AUTHORITY.

Clerk

HEREFORD:
Printed by Anthony Brothers Limited, Maylord Street.

CITY OF HEREFORD.

Sanitary Committee:

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Councillor T. J. Cook.
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Rev. W. H. Murray-Ragg.
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Miss S. M. Smith.

Medical Officer of Health	J. W. Miller. M.D., D.P.H.
Public Analyst	A. Bostock Hill, M.D., D.P.H., F.I.C.
Sanitary Inspector	S. Protheroe, Assoc. Royal Sanitary Institute.
Matron of Isolation Hospital ..	Miss B. M. Stafford.
Clerk	D. H. Pickard.

EXTRACT FROM THE ORDER OF THE LOCAL GOVERNMENT BOARD, 23rd MARCH, 1891.

"(14.) He shall also make an annual report to the Sanitary Authority, up to the end of December in each year, comprising a summary of the action taken, or which he has advised the Sanitary Authority to take, during the year for preventing the spread of disease, and an account of the sanitary state of his District generally at the end of the year. The report shall also contain an account of the inquiries which he has made as to conditions injurious to health existing in the District, and of the proceedings in which he has taken part or advised under any Statute, so far as such proceedings relate to those conditions; and also an account of the supervision exercised by him, or on his advice, for sanitary purposes over places and houses that the Sanitary Authority have power to regulate, with the nature and results of any proceedings which may have been so required and taken in respect of the same during the year. The report shall also record the action taken by him, or on his advice, during the year, in regard to offensive trades, to dairies, cow-sheds, and milk shops, and to factories and workshops. The report shall also contain tabular statements (on Forms to be supplied by Us, or to the like effect), of the sickness and mortality within the District, classified according to diseases, ages and localities."

EXTRACT FROM LOCAL GOVERNMENT BOARD'S MEMORANDUM AS TO ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH, NOV., 1908.

As subjects concerning which the Board desire to obtain, through Annual Reports of the Medical Officer of Health, not only definite general information, but record also of particular changes of condition that may have occurred incidentally or by action of the local authority, the following deserve to be specially borne in mind:—

Physical features and general character of the district and general conditions of its population.

The chief occupations of the inhabitants, and the influence of any particular occupation on public health.

House accommodation, especially for the working classes: its adequacy and fitness for habitation. Sufficiency of open space about houses, and cleanliness of surroundings. Supervision over erection of new houses. Action under Parts I., II. and III. respectively of the Housing of the Working Classes Act, taken or needed.

Water supply of the district or of its several parts: its source (from public service or otherwise), nature (river water, well water, upland water, etc.), sufficiency, wholesomeness, and freedom (by special treatment or otherwise) from risks of pollution. In the case of waters liable to have plumbo-solvent action, any facts either clinical or chemical, whether negative or positive, as to contamination of the water by lead should be stated, and whether administrative action has been taken during the year in respect of such contamination.

Milk supply: character and wholesomeness of milk produced within the district or imported; condition of dairies, cow-sheds, and milkshops; administration in regard to milk. Tuberculous milk.

Other foods: unsound food and food inspection; sanitary condition of premises where foods are prepared, stored, or exposed for sale. Meat inspection, disease in meat, and condition of slaughterhouses. Action under Sale of Food and Drugs Acts, taken or needed. Action under section 117 of the Public Health Act, 1875. Number of carcases and parts of carcases condemned for tuberculosis.

Sewerage and drainage: its sufficiency in all parts of the district. Condition of sewers and house drains. Method or methods of disposal of sewage. Localities where improvements are needed.

Pollution of rivers and streams in the district: the sources and nature of such pollution, and any action taken to check it.

Excrement disposal: system in vogue; defects, if any.

Removal and disposal of house refuse—whether by public scavenger or occupiers: frequency and method.

Nuisances: proceedings for their abatement—any remaining unabated.

Byelaws as to houses let in lodgings, offensive trades, etc. Details as to number of premises coming under each set of bye-laws, and action taken. Any need of amendment or further bye-laws.

Schools, especially public elementary schools; sanitary condition of, including water supply; action taken in relation to the health of the scholars and for preventing the spread of infectious disease.

Methods of dealing with infectious diseases; notification; isolation hospital accommodation, its sufficiency and efficiency; disinfection.

Methods of control of tuberculosis; whether any system of notification of cases of pulmonary tuberculosis, compulsory or voluntary, is in operation. Number of cases notified; what action is taken in respect of known cases and of deaths. Amount of hospital accommodation for cases of pulmonary tuberculosis in infirmaries and elsewhere, for advanced and for earlier cases of the disease.

" With regard to such points it should be remembered that these reports are for the information of the Board and of the County Council as well as of the Council of the District, and that a statement of the local circumstances and a history of local sanitary questions which may seeem superfluous for the latter, may often be needed by the former bodies.

" It is expected that each of the preceding points will be mentioned in the Annual Report and the extent of action or absence of action on each of them definitely stated."

Health Office,
Town Hall, Hereford,
Feb. 17th, 1909.

To the Mayor, Aldermen and Councillors of the City of Hereford.

Mr. Mayor and Gentlemen,

I have the honour to submit my First Annual Report on the health and sanitary condition of the City of Hereford.

The report is for the whole of the year 1908, during which period the duties of Medical Officer of Health were carried out by the late Dr. Moore, Dr. Herbert Jones, and during the latter part of the year by myself.

In writing certain portions of this report, more especially that concerned with the physical features of the town, I have had the advantage of consulting the carefully prepared records and reports of the late Dr. Moore.

In conclusion, I desire to thank the members of the Council, and especially the members of the Sanitary Committee for the consideration they have always given me and my official colleagues and the Staff of the Health Department and Hospital for the assistance they have afforded me.

I am, Gentlemen,
Your obedient servant,
J. W. MILLER.

CITY OF HEREFORD.

Statistical Summary for 1908.

Situation: North Latitude	52° 3' 20"
West Longitude	2° 43' 10"
Area of Municipal Borough	5,031 acres
Rateable Value	£126,081
Population at Census, 1901	21,382
Number of Inhabited Houses at Census 1901 ..	4,565
Average Number of Persons per House at Census, 1901	4·68
Estimated Population to the middle of 1908 ..	22,358
Average Number of Persons per acre	4·44
Birth-rate, 1908	21·5
Average Birth-rate for the previous ten years	23·9
Death-rate, 1908	14·62
Average Death-rate for the previous ten years	15·7
Corrected Death-rate, 1908	13·8
Zymotic Death-rate	·71
Infant Mortality per 1,000 births	95
Average Infant mortality for the previous ten years ..	122

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ANNUAL REPORT
OF THE
Medical Officer of Health
TO THE
TOWN COUNCIL, CITY OF HEREFORD,
For the year 1908.

PHYSICAL FEATURES, &c.

The City of Hereford occupies a central position in the county, surrounded by charming country and intersected by the River Wye, which follows a curved course through the town from west to east, separating the parish of St. Martin on the south from the rest of the city.

As the county town it is favourably situated, being within easy reach of other parts of the county.

The town lies in a basin. The average height above sea-level is 180 feet and a bench mark on the eastern jamb of the Market Hall entrance in High Town indicates 189 feet 3 inches above ordinance datum or mean sea level at Liverpool. The boundaries of the town reach 278 feet northwards in Huntington, 280 feet southwards near Redhill Junction, 281.4 feet north-east on Aylstone Hill, 275.2 feet on Hafod Road eastwards, and 300 feet westwards near Springfield House.

GEOLOGY.

The City stands upon a gravel deposit 900 acres in extent, the pebbles of which are well rounded and water-worn, consisting chiefly of Old Red Sandstone and Corn-stone, with an occasional intermixture of Silurian pebbles and a few specimens of Trap rocks transported from the upper reaches of the Wye in Brecconshire and Radnorshire.

A late resident, Mr. T. Curley, C.E., F.G.S., in a map, dated 1858, showed various interesting points in regard to the geology of the town. He estimated the average thickness of the gravel deposit at 30 feet. He wrote :—"At a level of 30 feet above this we meet with a second deposit, a bed of gravel perfectly level, evidently forming the edge of an old lake. Forty-two feet above this a gravel bed of small extent exists as a capping to Broomy Hill."

In the map drawn by Mr. Curley is seen in a vertical section a bed of strong puddle clay underneath this capping on Broomy Hill. Its situation was approximate to the site of the present Reservoir.

On the lower levels of the City are found beds of alluvium with a little silt upon each bank of the River Wye. In the map is shown in a vertical section dark vegetable soil and peat in the lower part of the City traversed by the Monkmoor Brook at the northern end of Edgar Street, thence by Coningsby Red Coat Hospital to Monkmoor Mill and Scut Mill; this bed of peat has been found in some places 3 to 4 feet in depth. Mr. Curley estimated the greatest thickness of gravel at the end of West Street, 33 feet; 31 feet at All Saints' Church; 25 feet at the Kerry Arms, and 15 feet at the County Gaol.

Old Red Sandstone is superficial on the elevations surrounding the City. Denudation in this locality could not have been less than 300 feet. The beds of fine sand interlaced with beds of gravel indicate that the deposition has occurred at different periods. Mr. Curley reported the existence of a deposit of mud 5 or 6 feet in thickness, capping a ridge in the line of the present East and West Streets. This would point to the formation of an island in that locality at some period before the waters had subsided to the present course of the Wye.

AREA AND BOUNDARIES.

According to the Census of 1901, the area of the City is 5,031 acres, and this is distributed among the civil parishes as in the Table, page 66.

The area of the three Wards is as follows:—

	Acreage.
Ledbury	1195
Leominster	2089
Monmouth	1747
Total	5031

In proportion to its population the City covers a larger area than other towns of the same size.

A map dated 1802 shows the same parishes within the liberties of the City then as now. Any increase in area has been in particular parishes.

The circumferential boundary of the City is 17¼ miles, of which 10½ miles lie on the north side of the River Wye and 5¾ miles on the south side. One mile of the river Wye forms part of the boundary of the City.

GENERAL FEATURES, &c.

The principal streets are broad and well paved, and present a smooth appearance. A tarry preparation was applied to the surface of all the main streets two years ago. On account of their smooth surface they are easier to keep clean, and there is less dust from motor traffic. The lessening of dust from a health point of view is very desirable. In the absence of large manufactories there is very little smoke and the buildings present a clean appearance.

Further remarks in regard to density of population, &c., are given later in the Report.

OCCUPATION.

The town is a large agricultural centre, and has one of the largest cattle markets in England.

The occupations followed are various — a large number of persons are employed in connection with the manufacture of cider, in printing works, etc., and the various places of business in the town; others are employed in tanning, brick-making, building, and as agricultural labourers, gardeners, and in the various trades.

There are thirteen farms, and several breweries, and flour and steam saw-mills in the town.

Other particulars in reference to occupation are given in connection with the Factory and Workshop Act, Offensive Trades, etc.

POPULATION.

The population of the City as estimated by the Registrar General to the middle of 1908 is 22,358 and it is on this estimate that I have calculated the various rates for the year 1908. This estimate is based on the assumption that the increase since 1901 has gone on at the same rate as between 1891 and 1901.

The population as calculated by the above method is below that estimated by your late Medical Officer of Health, but I think it is the more correct estimate, as the birth-rate has been declining since 1901 and the census of children under 14 years of age recently taken in Hereford shows there has been a decrease in the number of children attending school since 1903, this decrease being most marked under the age of 5 years.

Last year for the first time the 90 residents of Hereford in the Burghill Asylum were added to the estimated population. I have not added these residents to the population, because at the time the census was taken in 1901 there were a larger number of non-residents in Public Institutions in the City included in the census population, and I have re-calculated the rates for 1907 on the population minus these residents.

The following table shows the population of the City at the last census in 1901, arranged according to age and sex distribution, compared with the whole of the population of England and Wales at the same period:—

Age periods.	City of Hereford.			England and Wales.		
	Percentage.			Percentage.		
	Males.	Females	Total.	Males.	Females	Total.
0–5	5.04	5.29	10.33	5.70	5.72	11.42
5–10	5.24	5.23	10.47	5.35	5.37	10.72
10–15	5.52	5.13	10.65	5.14	5.14	10.28
15–20	4.70	5.42	10.12	4.94	5.04	9.98
20–25	3.63	5.18	8.81	4.53	5.07	9.60
25–35	6.47	8.72	15.19	7.64	8.52	16.16
35–45	5.64	6.52	12.16	5.94	6.35	12.29
45–55	4.39	4.93	9.32	4.29	4.63	8.92
55–65	2.89	3.71	6.60	2.79	3.18	5.97
65–75	1.94	2.43	4.37	1.47	1.84	3.31
75–85	0.72	1.02	1.74	0.51	0.70	1.21
85 and over	0.07	0.17	0.24	0.05	0.09	0.14
Total ..	46.25	53.75	100.0	48.35	51.65	100.0

Comparing the population of the City with that of England and Wales it will be seen that there are a smaller number of children under the age of 5 years, and also of persons from 20 to 45 years in Hereford than in England and Wales, and a larger proportion of persons aged 10 to 20 years and over the age of 45.

When the sexes are compared one finds that in the case of males there is a smaller number in Hereford under 10 years, and aged 15 to 45 years, and a larger number of males in Hereford at all ages above 45 years. In regard to females there is a smaller number of females under the age of 15 years and a larger number at all age periods from 15 years upwards as compared with England and Wales.

The smaller number of children under the age of 5 years in Hereford is accounted for by the lower birth-rates in Hereford in the years immediately preceding the census as compared with England and Wales.

The lower birth-rates in the City from 1873 to 1893 as compared with England and Wales would also partly account for the smaller number of males in Hereford from 15 to 35 years.

The figures also appear to indicate that there had been an emigration of males between the ages of 15 to 35 years and an immigration of females during the same period.

Of recent years there has been a falling off in the population in regard to children at ages under 14 years; this is shown by the recent census of children taken in Hereford, which is referred to in a later part of this report.

On account of the larger number of old people and larger proportion of females in the City as compared with England and Wales, a correction must be made in estimating the death-rate, for comparison with other towns.

The following table shows the population for years 1754, 1785, 1801 and periods of 10 years after this latter date, with the percentage increase over the previous period. The most marked increase in the population was during the period 1851 to 1861, 29.2 per cent: for 1811 to 1821 the increase was 24.4 per cent., and for 1891 to 1901 it was 5.5 per cent., more than double the rate of increase during the years 1881 to 1891.

Year.	Population.	Increase.	Percentage increase.
1754	5,232		
1785	5,638	406	7.7
1801	6,828	1,190	21.1
1811	7,306	478	7.
1821	9,090	1,784	24.4
1831	10,282	1,192	13.1
1841	10,921	639	6.2
1851	12,108	1,187	10.8
1861	15,646	3,538	29.2
1871	18,347	2,701	17.2
1881	19,822	1,475	8.0
1891	20,267	445	2.2
1901	21,382	1,115	5.5

BIRTHS.

During the year 482 births were registered, 260 males and 222 females. This gives a rate of 21.55 per thousand of the population, compared with 23.9 during the preceding year, a diminution of 2.4 per thousand, and comparing the rate with the average for the last 7 years, a diminution of 2 per thousand.

The birth-rates for England and Wales for the year 1908 were as follows:—

	Per 1000 of population.
England and Wales	26.5
76 Great Towns	27.0
142 Smaller Towns	26.0
England and Wales less the 218 towns	26.2

The number of married persons in Hereford at the last census was given along with the statistics for the whole county and not separately. There can be no doubt that the most accurate rate is that calculated on the number of married women between the ages of 15 and 45 years.

A more approximate estimate to the true rate is obtained by calculating the rate on the number of females aged 15 to 45 years. Assuming the proportion this year is the same as the year 1901, when the census was taken, the rate is 83.4 per 1,000.

Comparing the rates in the different Wards, the rate was highest in Leominster Ward (25.9), lowest in Ledbury Ward (18.01), and the rate for Monmouth Ward was 20.3.

The following Table shows the birth-rates for the City for quinquennial periods since the year 1876, compared with the rates for England and Wales during the same periods.

Period.	Birth-rates per 1,000 of the population.	
	Hereford.	England and Wales.
1876-80	25.3	35.3
1881-85	25.4	33.5
·1885-90	24.7	31.4
1891-95	25.0	30.4
1896-1900	25.3	29.2
1901-1905	23.9	28.1
1906	21.5	27.07
1907	23.9	26.2

It will be seen from this table and Chart I. that there has been a steady decline in the birth-rate for England and Wales since the year 1876. In the case of Hereford from 1876 to 1900 there was very little variation in the average, but since 1900 there has been a rather marked decrease. The lower rates for the City since 1876 as compared with England and Wales are probably partly accounted for by the fact that the proportion of married women in Hereford from 15 to 45 years is less than that for England and Wales.

There were 23 illegitimate births registered during the year. In two instances the mothers belonged to outside districts, and one of these births as well as 6 others took place in the Workhouse; these have been referred to their respective Wards. Excluding the two births referred to above, the percentage of illegitimate to legitimate births was 4.3.

There were eleven illegitimate births in Ledbury Ward, 8 in Leominster and 4 in Monmouth Ward.

The percentage of illegitimate to legitimate births has shown a satisfactory decline during the last 28 years; for the period 1881-91 the percentage was 6.8, 1891-1901, 5.6, and for the years 1901 to 1907 inclusive 4.1 per cent. The percentage for England and Wales for the period 1901-05 was 3.95.

Out of the 23 illegitimate births, 6 deaths occurred under 1 year, equal to a percentage of 26 of illegitimate births or 260 per 1,000, as compared with 95 per 1,000 for legitimate children. Some particulars of these deaths are given under Infantile Mortality and Diarrhoea.

	Wards.			
	Ledbury.	*Leominster*	*Monmouth*	*City.*
Population	8548	8404	5406	22358
Acreage	1195	2089	1747	5031
Persons per acre	7.15	4.02	3.09	4.44
	M. F.	M. F.	M. F.	M. F.
Births	79 75	122 96	59 51	260 222
	154	218	110	482
Birth-rate	18.01	25.94	20.34	21.55
Deaths	129	126	72	327
Death-rate	15.09	14.99	13.31	14.62
Infantile Mortality	17	18	11	46
Rate	110.38	82.56	100.0	95.43
Zymotic Disease	7	7	2	16
Rate	.81	.83	.36	.71
Phthisis	15	10	6	31
Rate	1.75	1.189	1.109	1.38
Other Tubercular Disease	5	5	1	11
Rate	.58	.59	.18	·49
†Other Respiratory Disease	11	15	10	36
Rate	1.28	1.78	1.84	1.61

(*a*) Rates calculated per 1,000 of the population.

†(*b*) Includes Bronchitis, Pneumonia and Respiratory diseases other than Phthisis.

STILL-BIRTHS.

The number of still-born children interred in the cemetery during 1908 was eighteen.

DEATHS.

The total number of deaths registered during the year was 349; of these 32 were non-residents and have been excluded and 10 deaths of residents in the Burghill Lunatic Asylum have been included.

Of the 32 non-residents, 27 were from districts in Herefordshire, 2 were from Radnorshire, 2 from Breconshire, and 1 from Wiltshire; 15 of these deaths occurred in the Workhouse and the same number in the Herefordshire General Hospital. Of the two remaining, both males, one death occurred from drowning in the river Wye, and the other death was caused by the man committing suicide by throwing himself in front of a passing train.

Of residents, 27 deaths occurred in the Workhouse and have been assigned to their respective Wards as follows:—Ledbury, 13; Leominster, 9, and Monmouth, 5; 24 occurred in the General Hospital and have been assigned as follows:—Ledbury Ward, 6; Leominster, 11, and Monmouth, 7.

The nett deaths after deducting 32 non-residents from the total number of registered deaths and adding on the 10 residents who died in the Asylum amounted to 327, 169 males and 158 females; equal to a recorded death-rate of 14.62 and a corrected death-rate of 13.8 per 1,000 of the population. The distribution of these deaths and the rates for each Ward are given along with other statistics in connection with the Wards in the table (page 17).

The highest death-rate was for Ledbury Ward, 15.09, and the lowest for Monmouth Ward, 13.31; the rate for Leominster Ward was 14.99.

I have already referred to the fact (page 14) that there is a larger proportion of females to males in Hereford than in England and Wales as a whole; taking the number of males as 100 in the year of the census (1901), the ratio of females to males in Hereford City was 117, and in England and Wales 107. There are also a smaller number of children under 5 years of age and a larger proportion of old people than in England and Wales as a whole.

The following table shows the death-rate for both sexes for England and Wales for the period 1901-05; the death-rate is higher among males than females at all age periods except 5-10 and 10-15 years, and the highest death-rates for both sexes are for the periods 0-5 years and 65 years and upwards.

CHART 1. Showing Birthrates from 1876

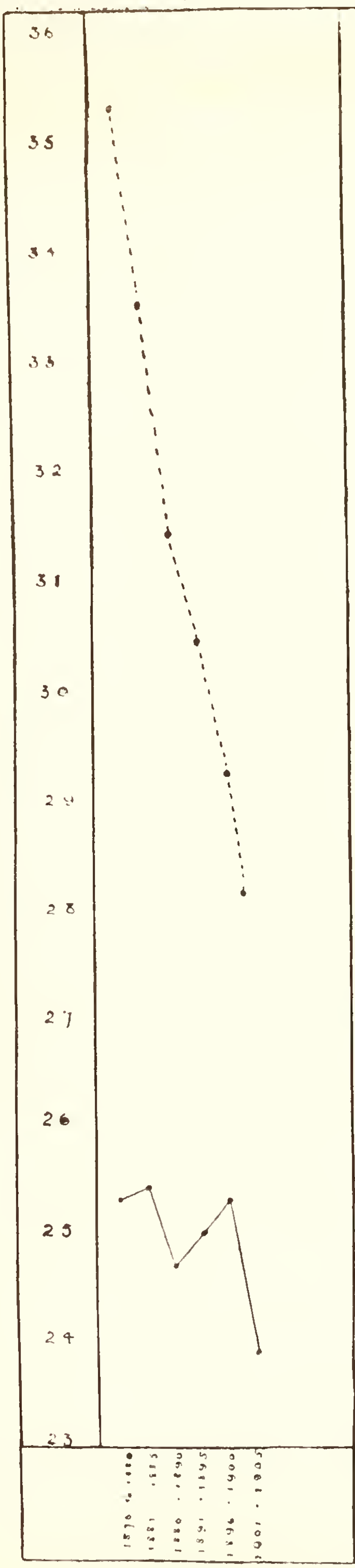
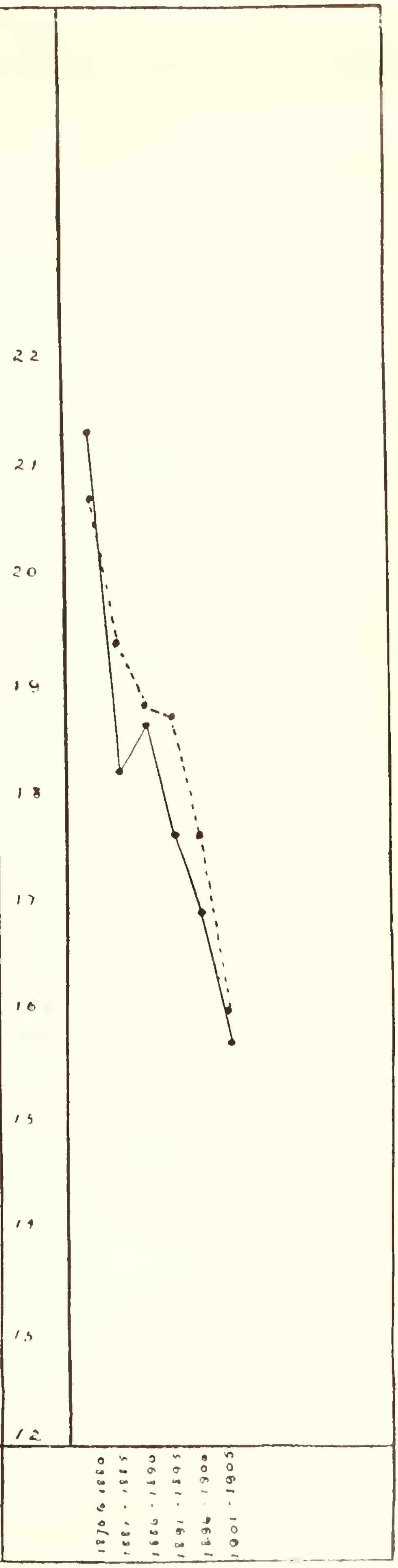


CHART 2. Showing Deathrates from 1876



STRAIGHT LINE INDICATES RATES FOR CITY OF HEREFORD

DOTTED " " " " " " ENGLAND & WALES

Death-rates 1901-05, England and Wales.

	Males.	Females.
All ages.	17.1	15.0
0–5	53.8	44.9
5–10	3.6	3.7
10–15	2.1	2.2
15–20	3.2	3.0
20–25	4.3	3.6
25–35	5.9	5.0
35–45	9.9	8.2
45–55	17.3	13.3
55–65	32.9	25.7
65–75	67.2	56.4
75–85	137.4	121.5
85 & upwards	283.0	261.3

Taking into consideration the age and sex distribution of the population of the City as compared with England and Wales, it is necessary in making comparisons with the death-rate for England and Wales and other towns that a correction should be made. A "Factor for Correction" has been prepared by the Registrar General for the 76 large towns, and he has kindly furnished me with the "Factor for Correction" for the City, viz., .9442. The corrected death-rate is obtained by multiplying the recorded death-rate by this factor; the death-rate for the City as so ascertained for the year 1908 was 13.8 per 1,000.

The method by which this factor is obtained is given on page xxxix. of the 68th Annual Report of the Registrar General, as follows:—

> "The mean death-rates for England and Wales (1891-1900) at certain age groups for males and females respectively are applied to the census populations at corresponding age groups in the several towns, the sum of the results for each town gives the number of deaths that would have occurred had the mortality in each sex and age group been the same as that in England and Wales as a whole and the death-rate based on this aggregate number of deaths is called the "Standard" rate.
>
> The difference between the "Standard" death-rate for any town and the mean rate for the whole country is due to the difference of sex and age constitution of the population and the quotient obtained by dividing the death-rate in England and Wales by this "Standard" death-rate gives a multiplier (called the "Factor for Correction") which when applied to the death-rate recorded in the town in any given year eliminates a large proportion of the error due to difference in sex and age constitution."

It is interesting to note that there are only two exceptions in the case of the 76 large towns where the "Factor" is less than unity, viz., Norwich and Plymouth.

With the exception of the year 1907, the death-rate of the City for 1908 was the lowest on record, as is shown in the accompanying table; this is very satisfactory. The decline in the death-rates of the City and England and Wales during quinquennial periods is also shown and illustrated in Chart 2.

	Hereford.		England and Wales.	
Year.	Death-rates.	5 yearly period rates.	Death-rates.	5 yearly periods.
1875	21.8			
1876	28.8			
1877	18.0			
1878	17.6			
1879	23.8			
1880	18.3	21.3	20.7	1876–80
1881	16.4			
1882	18.2			
1883	19.4			
1884	19.3			
1885	18.1	18.2	19.4	1881–5
1886	21.1			
1887	18.6			
1888	18.4			
1889	18.0			
1890	17.0	18.6	18.8	1886–90
*1891	16.0			
1892	17.7			
1893	18.8			
1894	18.0			
1893	17.9	17.6	18.7	1891–95
1896	17.4			
1897	16.7			
1898	16.2			
1899	18.0			
1900	18.5	16.9	17.6	1896–1900
1901	16.1			
1902	15.9			
1903	16.2			
1904	15.1			
1905	15.6	15.7	16.0	1901–05
1906	16.9		15.38	1906
1907	14.3		15.0	1907

* Up to the year 1891 deaths of non-residents which occurred in institutions in the City were included; since this year a reduction for non-residents has been made.

TABLE IV. (L.G.B.).

HEREFORD URBAN DISTRICT.

Causes of, and Ages at, Death during Year 1908.

Causes of Death.	Deaths at the Subjoined Ages of "Residents" whether occurring in or beyond the District.							Deaths at all Ages of "Residents" belonging to Localities, whether occurring in or beyond the District. Wards.			Total Deaths whether of 'Residents' or 'Non-Residents' in Public Institutions in the District.
	All Ages.	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Ledbury	Leominster	Monmouth	
1	2	3	4	5	6	7	8	9	10	11	12
Smallpox	..	..	..	..	..	..	..	..	..	..	..
Measles	5	..	4	..	..	1	..	2	3	..	2
Scarlet Fever	1	..	..	1	..	..	..	..	..	1	..
Whooping Cough	3	..	3	..	..	..	..	..	2	1	..
Diphtheria (including Membranous Croup)	2	..	1	1	..	..	..	2	..	..	2
Croup	..	..	..	..	..	..	..	..	..	..	..
Fever { Typhus	..	..	..	..	..	..	..	..	..	..	..
Fever { Enteric	..	..	..	..	..	..	..	..	..	..	..
Fever { Other continued	..	..	..	..	..	..	..	..	..	..	..
Epidemic Influenza	3	..	..	..	..	2	1	3	..	..	..
Cholera	..	..	..	..	..	..	..	..	..	..	..
Plague	..	..	..	..	..	..	..	..	..	..	..
Diarrhœa	6	4	2	..	..	..	..	3	3	..	..
Enteritis	3	..	1	1	..	1	..	..	1	2	..
Puerperal Fever	..	..	..	..	..	..	..	..	..	..	..
Erysipelas	..	..	..	..	..	..	..	..	..	..	..
Phthisis (Pulmonary Tuberculosis)	31	1	1	2	7	19	1	15	10	6	12
Other Tuberculous Diseases	11	3	6	..	..	2	..	5	5	1	1
Cancer, Malignant Disease	21	..	..	..	..	13	8	7	10	4	3
Bronchitis	18	4	2	1	1	4	6	7	8	3	1
Pneumonia	15	1	2	..	..	11	1	3	6	6	6
Pleurisy	1	..	..	..	..	1	..	..	1	..	..
Other Diseases of Respiratory Organs	2	..	..	..	..	..	2	1	..	1	1
Alcoholism (Cirrhosis of Liver)	3	..	..	..	..	2	1	1	1	1	..
Venereal Diseases	..	..	..	..	..	..	..	..	..	..	..
Premature Birth	7	7	..	..	..	..	..	5	1	1	..
Diseases and Accidents of Parturition	..	..	..	..	..	..	..	..	..	..	..
Heart Diseases	47	..	1	..	..	19	27	23	14	10	13
Accidents	7	2	1	2	..	1	1	2	3	2*	4*
Suicides	1	..	..	..	..	1	..	..	1	..	†
Other Septic Diseases	4	..	..	2	1	..	1	1	3	..	2
All other causes	136	24	7	1	..	38	66	49	54	33	45
All Causes	**327**	**46**	**31**	**11**	**9**	**115**	**115**	**129**	**126**	**72**	**92**

* *In addition*, one non-resident was drowned in river Wye within city; † another committed suicide—killed by railway train within city.

NOTES.

(*a*) The deaths of residents occurring beyond the district are included in this table, and deaths of non-residents occurring in the district are excluded. *See* note (b) in Table 1 as to meaning of "residents" and "non-residents."

(*b*) Deaths of residents occurring in public institutions are allotted to the respective Wards according to the addresses of the deceased as given by the Registrar, and in addition are classified under "Public Institutions."

(*c*) Under the heading of "Diarrhœa" are included deaths certified as from Diarrhœa, alone or in combination with some other cause of ill-defined nature; and also deaths certified as from

Epidemic enteritis.
Zymotic enteritis.
Epidemic Diarrhœa, Summer Diarrhœa.
Dysentery and Dysenteric Diarrhœa.
Choleraic Diarrhœa, Cholera, Cholera Nostras (in the absence of Asiatic Cholera).

(*d*) Under the heading of "Enteritis" are included those certified as from Gastro-Enteritis, Muco-Enteritis and Gastric Catarrh, unless from information obtained by enquiry from the certifying practitioner or otherwise, there has been reason for including such deaths, especially those of infants, under the specific term "Diarrhœa." Deaths from Diarrhœa secondary to some other well-defined disease are included under the latter.

The following are the death-rates for England and Wales for the year 1908:—

	Death-rate.	
	Crude.	Corrected.
England & Wales	14.7	14.7
76 Great Towns	14.9	15.8
142 Smaller Towns	14.0	14.7
England & Wales less the 218 Towns	14.7	13.8

The death-rate for the City compares favourably with the death rates of other towns of the same size.

The largest number of deaths in the city occurred during the first quarter of the year, 110; the deaths during the remaining quarters were 76, 68 and 73 respectively.

The percentage of deaths at different age periods was as follows:—

46 deaths occurred under 1 year	14.07	per cent.
31 deaths occurred from 1 to 5 years ..	9.48	,,
20 deaths occurred from 5 to 25 years ..	6.11	,,
115 deaths occurred from 25 to 65 years ..	35.17	,,
115 deaths occurred from 65 years & upwards	35.17	,,

Thus 23.55 per cent. of the deaths occurred under 5 years of age, 41.28 from 5 to 65 years, and 35.17 per cent. from 65 years and upwards.

The following are the rates per 1,000 for each sex for the following age periods for the year 1908:—

Age periods	Males.	Females.
0–5	35.5	31.2
5–15	.83	3.8
15–25	2.6	1.6
25–65	14.9	9.3
65 & upwards	93.4	71.6
All ages	16.3	13.3

There has been a satisfactory decline in the number of deaths under 5 years of age, especially in the number of deaths during the first year since 1875.

Period.	Percentage of deaths under 5 yrs.
1875–1880	31.1
1881–1890	29.2
1891–1900	27.8
1901–1907	26.2

The deaths during 1908 arranged according to various age periods are shown in Table IV. (L.G.B.) and in Table A, Appendix, which shows all deaths which have occurred during the year from the various causes.

The largest number of deaths, 80 per cent., occurred from the following causes, as illustrated in Chart 3.

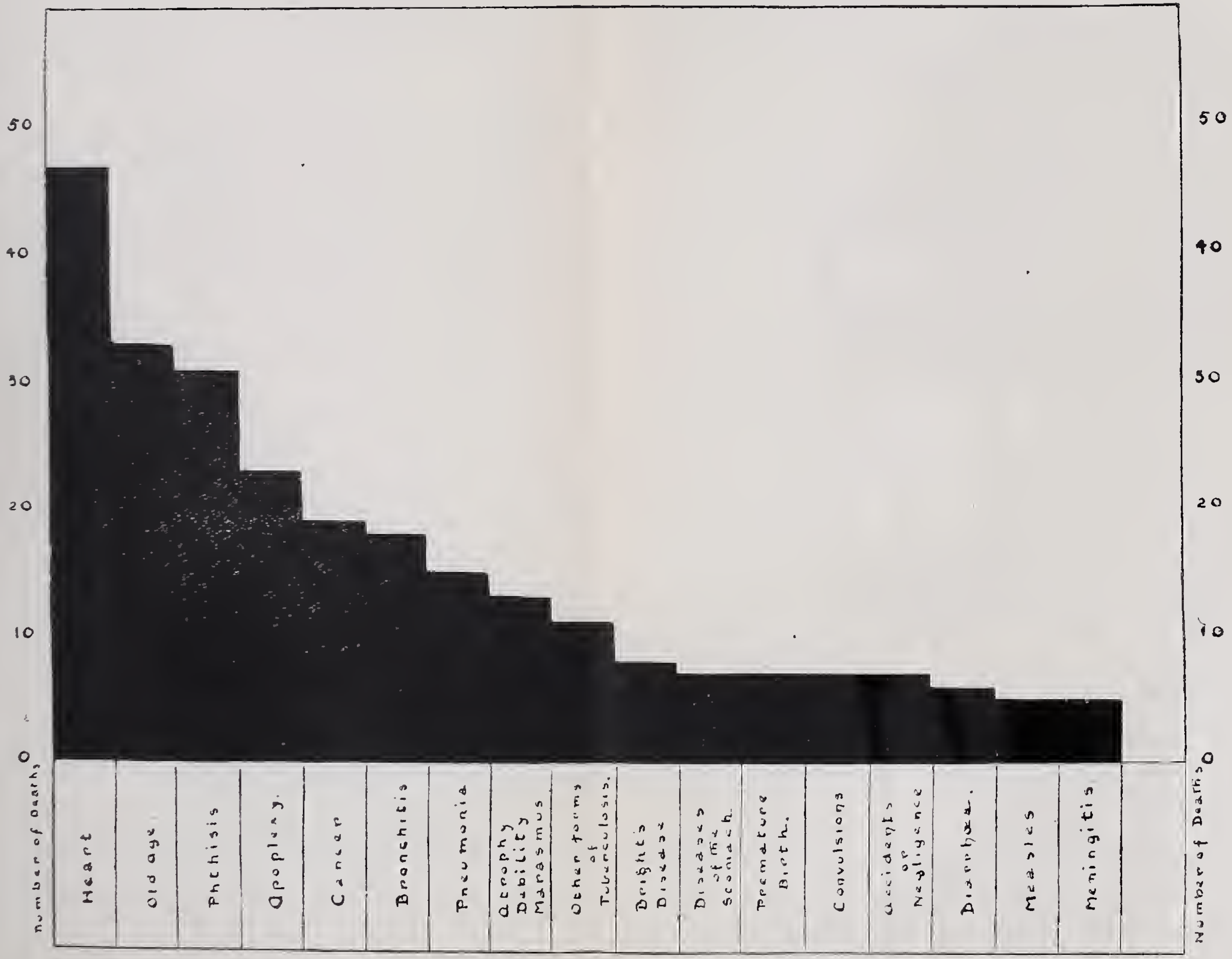
Causes of Death.	Number.	Percentage.
Heart Disease	47	14.34
Old Age	33	10.00
Phthisis	31	9.48
Apoplexy	23	7.03
Cancer	19	5.81
Bronchitis	18	5.50
Pneumonia	15	4.58
Atrophy, Debility, Marasmus and allied causes	13	3.97
Other forms of Tuberculosis	11	3.36
Bright's Disease	8	2.44
Diseases of the Stomach	7	2.14
Premature Births	7	2.14
Convulsions	7	2.14
Accidents or Negligence	7	2.14
Diarrhœa	6	1.83
Measles	5	1.52
Cerebral Meningitis	5	1.52
Total	262	80

Compared with last year there has been an increase of 9 deaths from Phthisis, 7 from Heart Disease, 5 from Diarrhœa, 2 from Premature Birth, and one each from Whooping Cough, Influenza and Diphtheria. There has been a decrease of 12 deaths from Measles, and 1 from Puerperal Fever.

UNCERTIFIED DEATHS.

There were 3 uncertified deaths during the year (·9 per cent.), and the following causes of deaths were assigned :—male, 79 years, General Debility, Syncope ; male, 5 hours, Premature Birth ; and a female, 37 years, Heart Disease.

CHART 3 Showing the principal causes of death (80%) in the city during the year 1908



INQUESTS.

During the year 15 inquests were held on the deaths of residents and the verdicts found by the coroner's juries were as follows :—

Natural Causes.	
Convulsions	2
Heart Disease	5
Accidents or Negligence.	
Drowning	2
Burns	1
Suffocation	1
Injuries	1
Blood Poisoning following injury	1
Suicide.	
Cut Throat	1

INFANTILE MORTALITY.

During the year 46 deaths occurred of infants under one year, and the infantile mortality rate (proportion of deaths under one year of age to 1,000 births) was 95. The infantile death-rates for England and Wales during 1908 were as follows :—England and Wales, 121 per 1,000 births ; 76 great towns, 128 per 1,000 ; 142 smaller towns, 124 per 1,000 ; England and Wales, less the 218 towns, 110 per 1000.

The rate for the City was the same as last year, and with the exception of 1907, is the lowest since the year 1881.

Of the 46 deaths, 27 were males and 19 females ; 17 deaths occurred in Ledbury Ward, 18 in Leominster and 11 in Monmouth Ward, the rates being 110, 82 and 100 respectively.

Fifteen deaths occurred in the first quarter of the year, 5 in the second quarter, 20 in the third quarter and 6 in the last quarter ; thus the largest number occurred in the third quarter.

Table V. (L.G.B.), Appendix, shows the various causes of death and the age at death. The causes may be arranged into the following groups :—

Causes of Death.	*Number.*	*Percentage*
I.—Premature Birth	7	15.2
II.—(*a*) Diarrhœa and Enteritis	5	39.1
(*b*) Debility, Atrophy, Marasmus, &c.	13	
III.—Tuberculosis	3	6.5
IV.—Convulsions	5	10.8
V.—Respiratory Disease	5	10.8
VI.—Infectious Disease	0	0
VII.—Others	8	17.6

If Tuberculosis be included, 45.6 per cent. of the deaths probably occurred largely from improper feeding and impure milk ; in addition some of the deaths from Convulsions, as enquiry showed, were also due to the same cause.

Twelve deaths occurred during the first month, nearly a quarter (7 within the first week), 5 during the second and third months; 18 from the third to the sixth month, and the remainder (11) during the last six months.

Enquiries were made into 19 cases, where it was considered that errors in feeding had been connected with the death of the infant. Particulars of four of these deaths are given under Diarrhœa, page 43, and I obtained the following particulars of the remaining 15 deaths.

BREAST MILK.—Only two cases were fed on the breast alone; the causes of death were given as Malnutrition and Marasmus, the ages at death being 9 and 13 days respectively. One was a twin, and in both cases it was stated they were too weak to take the breast milk.

BREAST MILK AND COWS' MILK.—In five cases the breast was given for part of the time, and for the remainder cow's milk.

(1) Male, 6 months, cause of death Rickets. I found a large accumulation of refuse in the cellar at this house, causing a disagreeable odour.

(2) Male, 3 weeks, death from Convulsions. Breast at the commencement and cow's milk for the latter part.

(3) Male, 3½ months, death from Marasmus. The baby was sent away at the end of 3 months to have a slight operation; up to this time had been on breast milk. Recovery from the operation was good, but the change from breast milk to cow's milk apparently caused death at the end of another 2½ weeks.

(4) Female, 4½ months, death from Convulsions. Mother stated she had not had sufficient breast milk.

(5) Male, 1 month, died from Marasmus. A twin. Mother stated the baby was on breast-milk the greater part of the time.

BREAST MILK AND OTHER FOOD.—(1) Male, 3 months, cause of death Marasmus. On breast milk the first 3 weeks, Nestle's condensed milk for 6 weeks and cow's milk for the remainder of the time.

(2) Male, 3 months. Death from Marasmus. Breast milk the first month and condensed milk the last 2 months.

Of the remaining six, five were on cow's milk and one on cow's milk as well as patent foods.

COWS' MILK.—(1) Male, 5 months (illegitimate), death from Convulsions. Milk diluted with oatmeal water.

(2) Female, 5 months, cause of death Teething and Convulsions. Milk diluted with barley water. The house was very dirty and shut in by other buildings.

(3) Male, 4 months, cause of death Inanition. Milk diluted with oatmeal water.

(4) Male, 1 month (illegitimate), death from Inanition. Milk diluted with lime water. House overcrowded and back to back.

(5) Female, 3 days, died from Inanition. Death caused by congenital malformation of the heart.

Cows' Milk and Other Food.—Male, 5 months, death from Convulsions. Cow's milk at the commencement, latter months Neaves' and Mellin's foods.

Number of Children.— Enquiries into the number of children living and dead showed that out of 82 children of 14 families, 45 were living and 37 dead, *i.e.*, only 54 per cent. had survived.

Sanitary Condition of Houses, Overcrowding, &c.—The sanitary condition of the houses was on the whole good, and there was only one case of overcrowding; in this house, containing three rooms, a back to back house, there were 9 inmates.

In one house refuse which had accumulated for years was found in the cellar, and house-to-house inspection of the remaining houses in the terrace showed that in some of them the same condition prevailed. Notices were served on the owner of the property, and all the refuse was removed.

In regard to sanitary conveniences, one house was supplied with the earth system and the remaining houses with the water system.

In the majority of cases refuse was collected in wooden boxes, which were emptied weekly by the scavenging department; in several instances the refuse was deposited in the back or front garden. The majority of the houses had a strip of back garden.

Remarks.—With two exceptions and these weakly infants who were unable to take the breast milk, all the infants were on cow's milk or other artificial food. Cows' milk, however good, does not take the place of breast milk, which should be given for the first nine months of life.

In the majority of cases cows' milk was used.

Two deaths occurred in January, 1 in February, 1 in April, 1 in July, 2 in August, 4 in September, 2 in October, 1 in November and 1 in December. Nine deaths occurred during the warm weather, when it would be difficult to keep cow's milk good. It is during the hot weather that flies abound, and these pests are found in largest numbers on deposits of refuse and manure heaps; they settle on food, particularly milk, and convey germs on their bodies and wings, readily polluting milk and other food.

In most of the houses the food was stored in the back kitchen, in a few cases in the cellar, so that in the absence of any special food cupboard, flies would have free access.

It is of the greatest importance that accumulations of manure should only be allowed to remain for short periods during the summer months.

INFANTILE MORTALITY FOR 10 PREVIOUS YEARS.—In order to obtain a better insight into the causes of Infantile Mortailty in the City, I have obtained particulars of the causes of death for the 10 years 1898-1907.

The following table shows the number of deaths under one year in the city from various causes for each year since 1898.

Causes of death.	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	Years 1898–1907
Premature birth	3	13	6	13	11	8	9	7	5	5	80
Congenital Malformations ..	2	3	2	3	1	3	2	1	3	—	20
Debility, Atrophy, Marasmus and associated causes ..	26	15	8	6	9	23	10	7	7	7	118
Respiratory Disease	5	7	13	10	12	14	16	10	12	8	107
Tuberculosis	3	5	4	8	1	7	4	4	4	4	44
Diarrhœa	3	6	5	1	3	2	1	—	8	1	30
Enteritis	5	1	4	2	2	1	3	—	1	3	22
Convulsions	18	16	11	9	9	4	6	10	14	9	106
Measles	—	—	1	—	—	5	—	—	—	7	13
Whooping Cough	—	—	6	3	1	1	5	—	7	2	25
Other Infectious Disease ..	—	—	—	—	—	—	—	—	—	—	—
Overlaid	—	—	1	1	—	2	2	—	2	—	8
Other Diseases	7	10	6	8	9	8	3	2	6	5	64
Total	72	76	67	64	58	78	61	41	69	51	637

Some interesting points can be deduced. The highest rate occurred in the year 1899, and in this year the number of deaths which occurred from diarrhœa, convulsions; atrophy, debility and other associated causes, was high.

In 1906 the rate was 144, and in this year the number of deaths from Diarrhœa was the highest of any of the 10 yearly periods; the number of deaths from causes connected with improper feeding was also high.

In 1905 the rate was the lowest recorded for the city since 1881, and there were no deaths from diarrhœal diseases and the deaths from causes connected with errors in diet were also low.

The percentages of the various causes of infantile death for the years 1898–1907, are as follows:—

Disease.	Number.	Percentage.
I.—Premature Birth and Congenital Defects	100	15.7
II.—Diseases of Digestive Organs, mainly:—Diarrhœa, Enteritis, Atrophy, Debility, Marasmus, etc.; and Tuberculosis.. ..	214	33.6
III.—Convulsions	106	16.7
IV.—Respiratory diseases	107	16.8
V.—Whooping cough, Measles and other Infectious Diseases	38	5.9
VI.—Other diseases	72	11.3
	——	——
Total	637	100

Of the 637 deaths,* 341 (over half) occurred during the first three months; 123 during the second three months (19.3 per cent.) and 173 (27.2 per cent.) during the last six months.

The following Table shows the infantile mortality rates from the various causes (1901—05), for the City and England and Wales.

1901-5.	*Hereford City.*		*England and Wales.*
Disease.	*Number of deaths.*	*rate per 1000 births.*	*rate per 1,000 births.*
Premature Births	48	18.4	20.2
Congenital Malformation..........	10	3.8	5.9
Debility, Atrophy, Marasmus, &c.	55	21.2	18.5
Enteritis 8	15	5.8	25.4
Diarrhœa 7			
Convulsions	38	14.6	14.4
Tubercular diseases	24	9.2	5.9
Respiratory diseases	62	23.8	23.1
Whooping Cough	10	3.8	5.2
Measles	5	1.9	2.7
Other Infectious diseases	0	0	.8
Overlaid	5	1.9	1.9
Others	30	11.6	13.6
Average 1901-5	60	116	137

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* 225 under one month (35·3 per cent).

In comparison with the whole of England and Wales, the rate for Hereford is much lower, but in the rate for England and Wales are included the 76 large towns where the rates are fairly high. In regard to Debility, Atrophy, Marasmus, etc., conditions in a fair proportion of the cases connected with improper feeding, the rate for Hereford is higher than that for England and Wales. The rate for Convulsions is practically the same and the rate for Tubercular diseases is higher in Hereford.

The rates for Whooping Cough and Measles are both lower in Hereford, but it is particu'arly in regard to Diarrhœa and Enteritis (all forms) that the rate in Hereford is much lower than that for England and Wales, less than one quarter. This low death-rate, as well as other points in connection with the disease, are discussed separately.

The rates for the City and the various Wards during the last 8 years are given below :—

			Wards.	
Year.	*City.*	*Ledbury.*	*Leominster.*	*Monmouth.*
1901	129	142	124	115
1902	112	129	99	100
1903	138	120	165	118
1904	124	163	107	148
1905	78	87	56	117
1906	144	176	112	145
1907	95	88	97	102
1908	95	110	82	100
Average	114	127	105	118

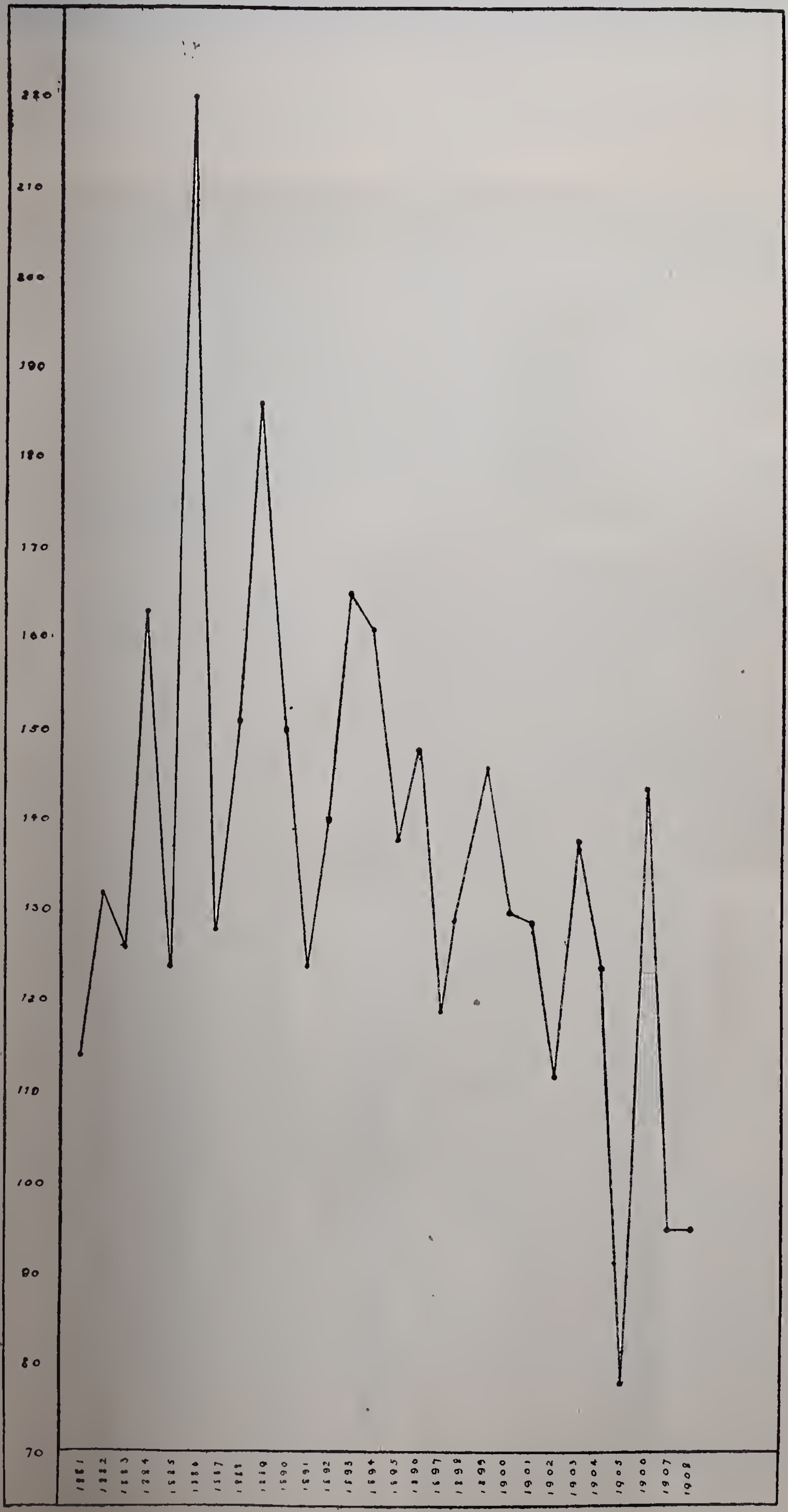
The average number of persons to the acre in 1908 was 4.4 for the City, 7 for Ledbury Ward, 4 for Leominster Ward and 3 for Monmouth Ward.

The above table shows that as recently as 1906 the rate in Ledbury Ward was 176, whilst in 1904 it was 163, similarly in Leominster Ward in 1903 it was 165; and in Monmouth Ward in 1904, 148. For the years 1905 and 1907 the rates were low throughout the country, the summers being cool and the rainfall higher than usual; when the summers are dry and hot the rates are high. The low average for the City is also partly due to the lower birth-rate.

The deaths from Diarrhœa are also low as compared with England and Wales, and the conditions favouring this low death-rate are discussed on page 44.

In a town such as Hereford, the average rate should not be more than 100, as the women are not employed in industrial occupations. The foregoing tables indicate that there is still a large amount of ignorance in regard to the feeding of infants, and the number of deaths from causes partly associated with errors in diet for the years 1901-05 was higher in proportion than that for England and Wales.

CHART 4 Showing the Infantile Mortality rates for the City for the last twenty eight years



Particulars for the years 1898-1907 show that the majority of the deaths under one year occured among working class families, and often among the lowest social class, in some of the insanitary parts of the City. On the other hand a fair proportion of the mothers lived in houses in a good sanitary condition.

The accompanying table and Chart 4, show that there has been a gradual reduction in the deaths under 1 year since 1881. This has no doubt been brought about partly during the last few years by the circulation of leaflets, giving particulars in regard to infant feeding, but still a good deal remains to be done.

I have already referred to the fact that nearly half the deaths occur within the first few months; it is therefore within a short period after the birth of the infant that the most good can be accomplished.

A fair proportion of births are not registered for some weeks after the birth of the child. It was on this account that the Notification of Births Act of 1907 was passed, to insist on births being registered within 36 hours after the birth of the child.

INFANTILE MORTALITY—1881-1907.

Year.	Rates. *City of Hereford.*	*Average.*	Rates. *England and Wales*	*Average.*
1881	114	132	130	138
1882	132		141	
1883	126		137	
1884	163		147	
1885	124		138	
1886	220	167	149	145
1887	128		145	
1888	151		136	
1889	186		144	
1890	150		151	
1891	124	145	149	151
1892	140		148	
1893	165		159	
1894	161		137	
1895	138		161	
1896	148	134	148	156
1897	119		156	
1898	129		160	
1899	146		163	
1900	130		154	
1901	129	116	151	138
1902	112		133	
1903	138		132	
1904	124		145	
1905	78		128	
1906	144		132	
1907	95		118	

The question of some arrangement being made whereby the houses of the poorer people could be visited after a birth and advice given in regard to the care of the infant (*e.g.*, by a nurse) is worthy of your consideration.

If the Notification of Births Act is to be adoped some such arrangement will have to be made.

ZYMOTIC DISEASE.

The zymotic death-rate for the year 1908 was .71 for the City, as compared with 1.11 for the year 1907 and .77 for the years 1898 to 1907. The zymotic death-rates for England and Wales for 1908 were as follows:—

	per 1,000 of population.
England and Wales	1.29
76 Great Towns	1.59
142 Smaller Towns	1.26
England and Wales less the 218 towns	.99

The rates for the various Wards were as follows:—Ledbury, .81; Leominster, .83, and Monmouth, .369.

The diseases included in the zymotic death-rate are seven in number:—Small-pox, Scarlet Fever, Diphtheria (including membranous croup), Typhoid Fever, Measles, Whooping Cough and Diarrhœa.

The number of deaths from these diseases during the year were as follows:—Small-pox, 0; Scarlet Fever, 1; Diphtheria, 2; Typhoid Fever, 0; Measles, 5; Whooping Cough, 3; and Diarrhœa, 6.

The accompanying table shows the number of deaths from the seven zymotic diseases since the year 1875.

The following table shows the death-rate for the City from each of the 7 Zymotic Diseases for the year 1908, compared with the rates for England and Wales for the same period:—

	City of Hereford.	England & Wales.	76 Great Towns.	142 smaller Towns.	England & Wales less the 218 Towns.
Smallpox	.00	.00	.00	.00	.00
Scarlet Fever....	.04	.08	.10	.06	.06
Diphtheria	.08	.15	.16	.15	.15
Typhoid Fever ..	.00	†.07	.08	.08	.07
Measles	.22	.22	.31	.20	.13
Whooping Cough	.01	.27	.29	.25	.25
Diarrhœa	.26	.50	.85	.52	.33

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† Also includes deaths from Typhus and Pyrexia, which form a very small proportion of the whole.

It will be seen that the rates for the City are lower than the rates for the 142 smaller towns in regard to each disease, with the exception of Measles. The death-rate from Diarrhœa is very favourable compared with other towns.

DEATHS FROM THE SEVEN ZYMOTIC DISEASES, 1875–1908.

YEAR.	Smallpox.	Scarlet Fever.	Diphtheria and Membraneous Croup.	Typhoid Fever.	Measles.	Whooping Cough.	Diarrhœa and Dysentery.
1875	0	7	1	3	1	3	8
1876	0	75	0	2	12	12	9
1877	0	11	0	0	6	2	5
1878	0	4	4	0	8	7	15
1879	0	0	4	0	5	27	5
1880	0	6	1	0	1	1	28
1881	0	13	2	2	0	0	4
1882	0	12	0	0	29	9	6
1883	0	9	3	0	1	0	8
1884	0	1	1	2	0	1	14
1885	0	0	0	0	16	1	8
1886	0	1	0	1	1	21	15
1887	0	0	0	0	0	1	12
1888	3	0	4	0	1	0	4
1889	0	0	5	2	22	3	7
1890	0	0	2	0	0	7	2
1891	0	1	2	1	0	2	1
1892	0	0	0	3	3	0	0
1893	0	16	1	3	0	8	6
1894	0	3	15	0	4	4	6
1895	0	3	11	2	3	1	6
1896	0	0	11	0	0	13	5
1897	0	3	6	0	16	0	5
							Diarrhœa
1898	0	0	3	1	3	0	5
1899	0	1	1	0	0	0	5
1900	0	1	1	0	11	14	4
1901	0	0	2	0	0	6	3
1902	0	0	2	0	1	2	2
1903	0	1	2	1	16	2	1
1904	0	4	7	0	1	10	3
1905	0	1	11	0	1	1	1
1906	0	0	8	1	3	10	9
1907	0	2	2	1	17	2	1
1908	0	1	2	0	5	3	6

SCARLET FEVER.

Fifty-eight cases of Scarlet Fever were notified during the year 1908, compared with 34 the previous year. 26 belonged to Ledbury Ward, 25 to Leominster and 7 to Monmouth Ward.

The following were the notifications received each month during the year:—

January	*February*	*March*	*April*	*May*	*June*
1	3	2	7	5	6
July	*August*	*September*	*October*	*November*	*December*
5	2	1	5	15	6

During the first quarter there were 6 cases; in the second quarter, 18; third quarter, 8; and in the last quarter, 26. The largest number of cases occurred in November.

There were 27 males and 31 females, and the ages were as follows:—

1–5 years.	5–10	10–15	15–25	25–35
9	27	13	5	4

thirty-six or 62 per cent. occurred under the age of 10 years, and 84 per cent. under the age of 15 years.

There was only one death, a female, 6 years, who died 2 hours after removal to Hospital. The disease was also complicated by Diphtheria, and death occurred from heart failure.

The recrudescence of the disease in November was due to school infection. Ten of the cases were associated with St. Peter's Infants' School, and particulars of these cases are given in the latter part of this report.

As the cases were increasing and several of the children lived in various parts of the town, I decided to close the school, and this was done on November the 19th: I also paid house-to-house visits in Bath Street and neighbourhood, and warned parents not to allow their children to play together in the streets.

The number of cases decreased, and during December only 4 cases were notified. By means of a list of absentees supplied by the Head Mistress of St. Peter's Infants' School, I found two cases; I also heard of several suspicious cases, through the kindness of medical practitioners in the town. The later cases were thus discovered at an early stage of the disease, and all the cases, 15 in number, notified in November were removed to Hospital, and the rooms and bedding disinfected.

Matters were also complicated by the occurrence of Rotheln among children in the town about the same time. Several suspicious rashes which suggested Scarlet Fever fortunately turned out to be the former disease.

The 58 cases occurred in 51 houses, and on the whole the sanitary arrangements were good. In four cases the yard gullies contained the old D trap, in another case the gully was untrapped and the drainage defective.

In several instances there was overcrowding. In one case a house in Westfields containing 2 living rooms and 3 bedrooms, was occupied by 1 adult and 7 children; in another case a house in Bath Street containing 1 living room and 2 bedrooms, was occupied by 2 adults and 6 children. A house in Catherine Street, with 2 living rooms and 3 bedrooms, contained 2 adults and 9 children (the patients are included in the number of children in each instance). In a large number of cases isolation at home was impossible.

'HOME' RETURN CASES—Out of the 13 cases treated at home, one return case occurred. The particulars are as follows:—

F. W., female, 5 years, developed the disease on March 25th, and disinfection was carried out on April 24th (29 days later), the child then being certified by the doctor in attendance as free from infection. V. W., a sister, aged 7 years, developed the disease on April 30th, and infection was probably from the sister.

SECONDARY CASES.—In another instance a male, S. D., started with Scarlet Fever June 22nd, and his brother A. D, developed the disease on June 29th. Both were removed to Hospital on June 30th; had S. D. been removed to Hospital earlier probably the occurrence of the disease in the brother A. D. would have been prevented.

'HOSPITAL' RETURN CASES.—A return case of Scarlet Fever means one occurring within a month of the return of another case from Hospital, infection being received from the discharged patient. The 'Home' Return case referred to above would correspond in the case of persons treated at home. There were 3 return cases out of the 45 cases of Scarlet Fever admitted to Hospital during the year 1908. For the years 1904, 1905, 1906, 1907 and 1908, altogether 173 cases were removed to Hospital, and there were 4 return cases, 1 in 1906 and 3 in 1908, the percentage being 2.15; this is not high, 4 per cent. being considered a fair average.

The particulars of the cases are as follows:—

Case I. Harold E., male, 6½ years, illness commenced on Dec. 15th. Previous sufferer was his brother Horace E., aged 2½ years, discharged from Hospital on Dec. 10th, 38 days after the onset of the disease. There were no complications in Hospital, but a few days after his return home Horace started with a slight nasal discharge. He did not sleep with his brother, but they played together downstairs.

Case 2. O. W., female, aged 3 years, illness commenced on Dec. 19th. Previous sufferer her brother, A. W., aged 11 years, discharged from Hospital on Dec. 7th, after 48 days' isolation. There were no complications in Hospital and none after his return home. A. W. slept in a different room to his sister.

Case 3. R. F., male, 1 year 6 months, illness commenced on Dec. 19th. Previous sufferer his sister, A. F., aged 8 years;

discharged from Hospital on Dec. 14th, after 34 days isolation. There were no complications in Hospital, but a few days after the return home of A. F. slight nasal discharge started and continued up to the time of the onset of disease in R. F.

There was no reason to think that any toys or articles of clothing had missed being disinfected. Every precaution was taken in regard to disinfection of person and clothing before leaving Hospital, the throat, ears and nose having been disinfected and a bath given containing a disinfectant. In two of the cases nasal discharge commenced shortly after return home, and I have no doubt the infection was from this source.

Occasionally some infection is retained in the throat, and although there are no signs of any inflammation in this region infection may be conveyed. The same applies to the nose, and it was probably from one of these sources that infection was conveyed in Case 2.

'Home' Return Cases corresponding to the cases which are associated with Hospital treatment not infrequently occur, such a case is referred to above; in addition, secondary cases sometimes occur in a house where a previous case has not been removed to Hospital.

In a house where there are perhaps half a dozen children and no proper means of isolation, removal of the first case to Hospital will often prevent infection spreading to several others.

Cases also recover in Hospital on account of careful nursing, which would in all probability have died if treated in homes where good nursing was impracticable.

The only death out of the 45 cases removed to Hospital was that of a female 6 years, who also had Diphtheria; I have previously referred to this case.

In the following Table the death-rates per 1,000 of the population for the city are compared with those for England and Wales in the same quinquennial periods.

SCARLET FEVER.

Hereford City.			England & Wales
Period. 5 yrs.	Number of deaths.	Rate per 1,000.	Rate per 1,000.
1876–80	96	1.007	.67
1881–85	35	.35	.43
1886–90	1	.009	.24
1891–95	23	.22	.18
1896–00	5	.047	.13
1901–05	6	.05	.12
1906	0	0	.10
1907	2	.08	.09

Further particulars in regard to Scarlet Fever since 1875 are given in the table on page 37.

With the exception of the period 1876–80, and 1891–95. the death rate from Scarlet Fever as compared with England and Wales has been lower in Hereford. For the year 1907 it was equal to that of England and Wales.

SCARLET FEVER STATISTICS, HEREFORD, from 1875

Year.	Notifications.	Under 5 Years of Age.	Total Deaths.	Treated in Isolation Hospital.	Attack per 1,000 Population.	Mortality per 1,000 Population.	Percentage Removed to Hospital.	Deaths in Hospital.	Notes.
1875	..	..	7	..	For this period Statistics not available.	.36			
1876	..	..	75	..		3.90			
1877	..	..	11	..		.57			
1878	..	..	4	..		.20			
1879	..	..	0	..		.00			
1880	..	..	5	..		.25			
1881	..	..	13	..		.65			
1882	..	..	12	..	..	.60			
1883	62	20	9	..	3.10	.45			
1884	21	11	1	..	1.05	.04	..	..	At this period (1883 to 1889 inclusive) notifications were voluntary, consequently comparisons with other years are highly unsatisfactory or worthless.
1885	7	3	0	..	0.35	.00	..	..	
1886	15	5	1	..	0.75	.04	..	..	
1887	33	3	0	..	1.65	.00	..	..	
1888	9	4	0	..	0.44	.00	..	..	
1889	14	6	0	..	0.69	.00	..	..	
1890	32	9	0	..	1.58	.00	..	..	
1891	26	10	1	..	1.28	.04	..	..	Compulsory Notification adopted, January 1890.
1892	72	40	0	..	3.53	.00			
1893	165	94	16	15	8.07	.78	9	1	ISOLATION HOSPITAL OPENED MAY, 10, 1893.
1894	146	81	3	38	7.09	.14	26	0	
1895	155	54	3	70	7.48	.14	45	1	
1896	70	20	0	17	3.35	.00	24	0	
1897	65	25	3	39	3.09	.14	60	1	
1898	31	8	0	16	1.46	.00	51	0	
1899	39	13	1	33	1.83	.04	85	1	*a*
1900	37	15	1	24	1.73	.04	65	1	
1901	51	15	0	32	2.38	.00	63	0	
1902	36	8	0	27	1.67	.00	75	0	*b*
1903	24	8	1	12	1.10	.04	50	1	*c*
1904	65	8	4	45	2.96	.18	69	4	*d*
1905	55	6	2	35	2.49	.09	64	1	*e*
1906	31	6	0	22	1.39	.00	71	0	
1907	34	8	2	26	1.52	.08	76	1	
1908	58	9	1	45	2.59	.04	77	1	*f*

(*a*) This patient was, after professional consultation, very carefully removed to the Isolation Hospital. She was in an almost hopeless condition, and death appeared imminent under very unsuitable home surroundings.

(*b*) The Isolation Hospital was closed to the public by order of the Sanitary Committee on February 24th, 1902, pending the erection of a Temporary Isolation Hospital for Small-pox cases. The Hospital was re-opened on 21st April. During that period 8 patients suffering from Scarlet Fever were treated in their own homes.

(*c*) A child exceedingly ill upon removal to the Hospital.

(*d*) Of these 4 cases, 2 were of a malignant character, and considered almost hopeless before removal to Hospital; the third case was complicated by Diphtheria, the fourth was accompanied by Bronchitis.

(*e*) This was a case from the Rural Districts admitted into the General Hospital, and removed thence into the Isolation Hospital.

(*f*) This patient was in a hopeless condition on admission and died two hours afterwards.

DIPHTHERIA.

During the year 26 cases* of Diphtheria were notified: 12 males and 14 females. Eleven cases were in Ledbury Ward, twelve in Leominster Ward and three in Monmouth Ward.

The ages were as follows :—

Age periods	*Under* 1 *year*	1–5	5–10	10–15	15–25	25–35
Number of cases	1	7	10	3	4	1

The majority occurred under the age of 10 years.

The number of cases notified in 1907 was 21.

Of these 26 cases, two deaths occurred: a male, four years of age, and a female, six years. Five of the cases were removed to Hospital and no deaths occurred.

The sanitary condition of the houses was on the whole satisfactory. In three houses there were defects, in one house defective w.c. and cistern, in another defective connection to w.c. and the drains insufficiently trapped, and in a third w.c. defective and drains not properly trapped.

The majority of the houses had a yard and back-garden combined, the yard being paved for a few feet adjoining the house. The refuse was kept in receptacles and removed weekly.

During the year a large number of throat swabs were taken for diagnostic purposes and for disinfection and in several instances the result of the bacteriological examination proved of considerable assistance.

The specimens were examined in the Bacteriological Laboratory of University College, Bristol.

The following is approximately the number of swabs taken for various purposes :—

	Positive.	*Negative.*	*Suspicious.*	*Total.*
Diagnosis	9	12	2	23
Contacts	0	44	0	44
Disinfection	0	17	4	21

Ten swabs were taken at the Isolation Hospital, one for diagnosis, and nine for disinfection.

It has been found by experience that the Diphtheria bacilli remain in the throat for an average period of three weeks from the onset of the disease, occasionally a few days less and, in some cases remain a few months in spite of local antiseptic treatment.

No disinfection has been latterly carried out in the town, until a swab taken from a case was returned negative, and I am indebted to Medical Practitioners in the town for taking these swabs.

In the Hospital no case was sent out until two swabs had been returned negative. There were no return cases.

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* In 21 houses.

The particulars of the following cases are of interest, as showing the value of a bacteriological examination :—

(1) A. T., a male, 4 years, developed the disease on Nov. 19th and died from the disease on Nov. 29th ; a cousin, L. B., male, 5 years, residing in a different part of the town, developed the disease on Nov. 27th ; swabs were then taken from eight contacts, these included the two brothers of A. T., who had visited L. B. 10 days preceding the onset. The swab from H. T., aged 5½ years, was returned as positive. H. T. was then isolated at home and local antiseptic treatment used for the throat ; a swab was taken at the end of 10 days and returned as negative. Disinfection was then carried out. No further cases occurred. H. T. was apparently in good health.

(2) V. F., a female, 6 years, developed the disease on Oct. 31. Scarlet Fever had previously commenced on Oct. 26th ; she was removed to Hospital and died shortly after admission.

On Nov. 2nd, E. M., her sister, 15 years, developed a sore throat, a swab was then taken from her throat and four others; the swab from E. M. was returned as suspicious and the throat swab of another sister, 2 years of age, was returned as positive. Both were removed to Hospital. The house has been already referred to as being overcrowded, it was recently condemned as being unfit for habitation ; the rooms were disinfected with formalin vapour, the bedding and clothes disinfected by steam, and in addition the whole of the house was washed down with a solution of disinfectant. No further cases occurred.

E. M. who was removed to Hospital, had a severe attack and only recovered after antitoxin treatment and careful nursing.

In the following Table the death rates for the City from Diphtheria are compared with those for England and Wales since the year 1876 :—

DIPHTHERIA.

Period.	*Hereford number of deaths.*	*Rate per* 1000.	*England & Wales rate per* 1,000.
1876–80	9	.09	.12
1881–85	6	.06	.15
1886–90	11	.108	.16
1891–95	29	.28	.25
1896–00	22	.20	.27
1901–05	24	.22	.20
1906	8	.45	.19
1907	2	.09	.17

For the year 1907 the death rate was lower for the city; it was higher for the period 1891–95 and for 1901–05, slightly higher; whilst for the year 1906, when the disease was present in epidemic form in the city it was over twice as much.

The following particulars showing the percentage of deaths to notifications of cases of Diphtheria for the city from the year 1890 are given below :—

TOTAL DIPHTHERIA CASES AND DEATHS SINCE 1890.

Year.	*Number of cases.*		*Deaths.*		*Percentage deaths to cases.*
1890	11		2		
1891	11	99	2	29	29.2
1892	6		0		
1893	7		1		
1894	48		15		
1895	27		11		
1896	33	74	11	22	29.7
1897	11		6		
1898	20		3		
1899	4		1		
1900	6		1		
1901	9	132	2	24	18.1
1902	14		2		
1903	18		2		
1904	36		7		
1905	55		11		
†1906	102	149	8	13	8.7
1907	21		2		
1908	26		3		

† Of the 166 cases notified in 1906, 64 were carriers.

The reduction in the death rate since 1901 may be attributed to the antitoxin treatment. Antitoxin is now supplied free by the Town Council.

ERYSIPELAS.

Twenty-five cases were notified during the year 1908, 15 males and 10 females. There were no deaths.

Six cases belonged to Ledbury Ward, 11 to Leominster Ward, and 2 to Monmouth Ward, these 19 cases occurred in 18 houses; and in addition 3 cases were notified from the Workhouse, 2 from the General Hospital and 1 from the Prison.

The ages were as follows :—

Age period	1–5	10–15	15–25	25–35	35–45	45–65	*over* 65
Number of cases	2	1	2	5	4	10	1

One person, male, aged 55 years, had two attacks of the disease during the year.

In regard to the part affected in 12 cases there was Erysipelas of the face ; in 6 cases, the face and other adjoining parts, as follows :—face and eyes (2), face and head, right cheek and ear, head and face (2). In one instance the left leg was affected, and in 6 instances the position was not stated.

In the majority of cases, 18 out of 25, the face and adjoining parts were affected. With the exception of Erysipelas of the left leg, there was no history of injury.

No secondary cases of infection occurred from any of the above cases.

Probably in the majority of the cases infection by the pathogenic germ resulted from a minute abrasion of the skin, the fact that exposed parts were affected gives support to this view.

PUERPERAL FEVER.

No case of this disease has been notified during 1908, compared with 2 in 1907.

TYPHOID FEVER.

No cases were notified during the year 1908, compared with 1 case notified in 1907 and 3 in 1906. Of the 3 cases notified in 1906 there was evidence that 2 had been imported from outside sources.

The following Table gives the notifications and death rates since the year 1891 :—

Year.	*Notifications.*	*5 yearly periods.*	*Deaths.*		*Percentage.*
1891	7	27	1	9	33.3
1892	6		3		
1893	8		3		
1894	2		0		
1895	4		2		
1896	3	15	0	1	6.6
1897	5		0		
1898	4		1		
1899	2		0		
1900	1		0		
1901	3	9	0	1	11.1
1902	2		0		
1903	1		1		
1904	3		0		
1905	0		0		
1906	3		1		
1907	1		1		

The preceding table shows that the disease has gradually diminished during the last 16 years, and the mortality has also decreased. The following table shows the death-rates per 1,000 of the population since 1876, compared with the rates for England and Wales for the same periods :—

TYPHOID FEVER.

Hereford City.			*England & Wales*
Period, 5 years.	*Number of deaths.*	*Rate per 1,000.*	*Rate per 1,000.*
1876–80	2	.02	.27
1881–85	4	.04	.21
1886–90	3	.029	.17
1891–95	9	.08¾	.17
1896–00	1	.009	.17
1901–05	1	.009	.11

This table shows that the death-rate per 1,000 of the population from Typhoid Fever in Hereford was less then one-tenth that of England and Wales from 1876 to 1890 ; from 1891–95 it was less than one-half ; from 1896–05 it was considerably less. The low incidence of the disease in the city is probably largely owing to water carriage system of sewerage, absence of privy middens, pail closets and ashpits, and the frequent collection of refuse from houses. For some years now the majority of the houses have been supplied with the water carriage system of drainage. Whilst the water supply is good, there still remain in some parts of the town wells and cesspools ; the latter render the well water liable to pollution, and although the drainage of the town will favourably compare with other towns of the same size, defects in drainage are frequently found and remedied.

DIARRHŒA.

Six deaths occurred during the year, compared with 1 in 1907 and 9 in 1906.

The rate per 1,000 of the population was .26 for 1908 and ·15 for the 10 years 1898—1907.

Three deaths occurred in Ledbury Ward, and 3 in Leominster Ward. The ages were as follows :—4 females, aged 3 months, 4 months, 1 year 8 months, and 4 years ; and 2 males aged 8 months. Of the deaths, one occurred in March, 3 in August and 2 in September.

I obtained particulars of 4 of the cases:—

(1) Male, 8 months, died on Aug. 28th. Had been fed on the breast the first 5 months and on cows' milk the last 3 months. There had been no other children. The sanitary arrangements were good. The house contained six rooms and there were four inmates.

(2) Female, 3 months, died on Aug. 30th. Was fed on the breast the first week and the remainder of the time on cow's milk. Total children, two, one living.

The house was back to back with a stable. There were 2 rooms and 3 inmates. Although the house was not visited until October, there were a large number of flies in the room. The front of the house faced on to a common yard, unpaved. Drainage was apparently good.

(3) Female, 4 months (illegitimate), died on Sept. 2nd. Had been fed on cows' milk diluted with water. The condition of the house was fair, there were four rooms and two inmates. The mother was a charwoman.

(4) Male, 8 months, died on March 5th. Was fed on the breast the first 7 months, and on cows' milk the last month. Total children 4, 3 living and 1 dead. The house contained six rooms and there were 5 inmates. The sanitary arrangements were good.

In all four houses the water carriage system of sewerage was in use; all the houses were supplied by town water. The refuse was kept in receptacles at the back of the houses and removed weekly.

In none of the houses were there pantries.

Remarks.—All four infants were on cows' milk at the time of death.

In the four cases the food was liable to be contaminated by dust and flies, especially was this the case in the house adjacent to the stable.

During the last seven years there has been a diminution in the deaths from Diarrhœa compared with previous years. For the years 1896–1900 the death-rate per 1,000 of the population was .22, whilst for the period 1901–05 it was .09, compared with .67 the rate for England and Wales.

The following Table shows the death-rate per 1,000 for the last 30 years :—

Diarrhœa and Dysentery.			*Diarrhœa, Dysentery and Cholera.*
Hereford City.			*England & Wales.*
Period.	*Number of deaths.*	*Rate per* 1,000	*Rate per* 1,000.
1876–80.....	62	.65	.85
1881–85.....	40	.04	.67
1886–90.....	40	.39	.68
1891–95.....	19	.18	.65
*1896–00.....	24	.22	.81
1901–05.....	10	.09	.67

* After 1898 Diarrhœa only.

It will be seen that the death-rate from Diarrhœa in the city during the last 30 years has been lower than that for England and Wales, and the contrast has been most marked during the last 15 years.

The death-rate of infants under one year per 1,000 deaths in respect to the city was also low for the years 1901–05, as compared with that for England and Wales. This has been already referred to.

There can be no doubt that the frequent removal of refuse, as well as other conditions already mentioned under Typhoid Fever, and the fact that the majority of babies are breast-fed largely account for the comparatively low death-rate.

During the third quarter of last year the weather was on the whole fine and dry. In July and August the rainfall was fairly low and the temperature moderate. During the first half of September rain was frequent and the temperature generally below the average, but towards the end of the month the town experienced the spell of warm weather which was general throughout the country.

The small number of deaths (1) in the year 1905 was due to the favourable meteorological conditions. When the summer is cool and the rainfall fairly high, there are fewer deaths than during a hot and dry summer.

It is interesting to note that when the temperature of the earth at a depth of 4 feet reaches 56° F. the number of deaths from Diarrhœa begins to increase.

MEASLES.

During the year 5 deaths occurred from this disease, compared with 17 during 1907; 4 occurred in January and 1 in February.

In 4 cases Pneumonia was given as a secondary cause of death. Two deaths occurred in Ledbury Ward and 3 in Leominster Ward. Two were males aged 2 years and 55 years, and 3 females aged 16 months, 17 months and 3 years.

During 1907 measles was prevalent in the town and the Infants' Departments of 5 schools were closed.

The small number of cases last year is probably accounted for by the fact that the disease was prevalent in epidemic form in 1907, and that the majority of the susceptible children contracted the disease.

Reference is made in a later part of this report in regard to notification of this and other infectious diseases from the various schools.

The following table shows rates per 1,000 since 1876.

It will be seen that with the exception of the period 1881-85, the death-rate from measles has been lower than that for England and Wales as a whole.

MEASLES.

Period.	*No. of deaths (Hereford.)*	*Rate per* 1,000.	*Rate per* 1,000 *(England and Wales.)*
1876—1880	32	.34	.38
1881—1885	46	.46	.41
1886—1890	24	.23	.46
1891—1895	10	.09	.40
1896—1900 ..	30	.29	.42
1901—1905	19	.17	.32
1906	3	.13	.27
1907	17	.76	.36

WHOOPING COUGH.

Three deaths occurred during the year compared with two during 1907. Two deaths occurred in September and one in August; two were in Leominster Ward and one in Monmouth Ward.

The three deaths were those of females aged 16 months, 23 months and 2 years. The following table shows death rates per 1,000 since 1876:—

	Hereford City.		*England & Wales.*
Period 5 years.	*number of deaths.*	*rate per* 1,000.	*rate per* 1,000.
1876–80	49	.51	.52
1881–85	11	.11	.45
1886–90	32	.30	.44
1891–95	15	.14	.39
1896–00	27	.24	.35
1901–05	21	.19	.30

The rates for the City compare favourably with those for England and Wales as a whole.

A large number of deaths from Measles and Whooping Cough could be prevented by careful nursing. In both diseases Bronchitis is a common complication, and if children are allowed to go out too soon lung complications follow.

During the 10 years 1898–1907, there were 53 deaths from Measles and 47 from Whooping Cough, total 100, compared with 10 deaths from Scarlet Fever, 39 from Diphtheria and 4 from Typhoid Fever. Thus the number of deaths from Whooping Cough and Measles was nearly double that from Scarlet Fever, Diphtheria and Typhoid Fever.

INFLUENZA.

Three deaths occurred from this disease during the year, all females, aged 51, 54 and 80. The three belonged to Ledbury Ward.

The number of deaths during 1907 was two, and the average for the 10 years 1898–1907 was six.

SMALLPOX.

The City has been free from the disease for the last few years; but it must be remembered that at any time the disease may be conveyed from adjoining towns or districts, in which cases occur, by tramps and others. It is important that information in regard to such cases should be available, and these particulars are given in the weekly list, supplied by the Local Government Board to Medical Officers of Health, which contains the number of notified cases of infectious diseases, including Smallpox, in the various towns and districts.

It was ascertained that there was a case of Smallpox in Bristol during the week ending Dec. 19th, 1908.

Various outbreaks of Smallpox have occurred in the City during the last 28 years.

In 1881 a male with Smallpox was admitted into the Workhouse. In 1886 a female belonging to the City developed Smallpox; infection was considered to have been received through sitting in a railway carriage with hop-pickers.

In 1888 there were 28 cases in the City, attended by 3 deaths. This outbreak was brought about through the admission into the General Hospital of a man suffering from the disease; through him the disease was conveyed to other persons in adjoining beds, and two persons developed the disease after leaving the Hospital. From this origin the disease spread rapidly.

There was no Infectious Disease Hospital at this time in the town, and tents were used for the patients.

The next outbreak occurred in 1893, 12 cases in all. Nine cases were treated in the Isolation Hospital, which was provided in May of this year, 1 in the Workhouse and 2 in the town. The disease was imported from surrounding districts in the county. It was at this time that a small Isolation Block was erected in the Workhouse grounds.

In 1895 a case occurred in the Workhouse. In 1896 nine cases occurred, all of which were removed to the Isolation Hospital.

The next case occurred in 1903, and was treated in the Workhouse. This case was brought into the City by a tramp.

I will refer later to the danger of tramps spreading the disease and the importance of having such persons under superveillance. The special block for the reception of Smallpox patients in the City was built in 1902.

VACCINATION.

Vaccination and re-vaccination constitute the best protection against Smallpox. In the past a large proportion of infants in the City have been vaccinated, but it is very much to be regretted that the number of conscientious objections to vaccination has increased, and during the first six months of the year 1908 the number received was three-quarters of the total number received during the whole of the year 1907.

For these and other particulars in the table I am indebted to Mr. R. Moore, Clerk to the Guardians.

Along with enquiries concerning notified infectious disease in the City, particulars are also obtained in regard to Vaccination, and out of 378 infectious cases occurring in 1906, 1907, 1908, it was found that 5 per cent. had not been vaccinated. The majority of the cases were under the age of 10 years.

The vaccination returns for the year ending Sept., 1907, published in the 37th Annual Report of the Local Government Board, show that the County of Herefordshire stood 13th in the list of counties in England and Wales in regard to the number of infants vaccinated by Public Vaccinators.

In 1907 the ratio of successful primary vaccinations of infants under one year to births for the whole County was 72.5 per cent. In regard to neighbouring counties, the percentage was 41.3 per cent for Gloucestershire, 57.8 per cent. for Worcestershire, and 55.3 per cent. for Warwickshire. A severe epidemic of Small-pox visited the town of Gloucester in 1896, and the large number of cases that occurred was largely owing to the small percentage of vaccinated persons among the inhabitants.

PERIOD.	No. of Births Registered.	Successfully Vaccinated.	Insusceptible to Vaccination	Had Small-pox.	Number in respect of whom Certificates of Conscientious Objection have been received.	Died Un-Vaccinated.	Postponement by Medical Certificate.	Removals of which Vaccination Officer was apprised.	Unknown Removals. Cases not found.	Unaccounted for.
Year ending Dec. 31. 1907	538	429	0	0	28	37	14	10	14	6
Jan. 1st to June 30. 1908	263	185	2	0	20	13	14	5	15	9

CITY HOSPITALS.

The Isolation Hospital for cases of Scarlet Fever and Diphtheria is situated in the parish of Tupsley, within the City, and the Small-pox Hospital in the parish of Hampton Bishop, outside the liberties of the city.

The Hospital was opened on May 10th, 1893, and the accompanying table shows the number of cases of the various Infectious Diseases admitted since. Provision is made for 12 patients in the Smallpox Hospital and 32 in the Fever Hospital.

Last year 77.5 per cent. of the notified cases of Scarlet Fever and 19.2 per cent. of Diphtheria cases were removed to Hospital. Many cases recovered which could not have been properly nursed in their own homes.

Particulars in regard to stay in Hospital, etc., are given in the accompanying table, there was only one death in connection with the 44 cases of Scarlet Fever admitted during the year, equal to a case mortality of 2.2 per cent. This case has already been referred to.

Two negative cases were admitted, viz., a case of Rotheln mistaken for Scarlet Fever, and a case of Tonsillitis sent in as Diphtheria.

ISOLATION HOSPITAL, 1908.

DISEASE.	Patients remaining in Hospital on January 1st, 1908.			Patients Admitted and Discharged in 1908.			Patients remaining in Hospital on January 1st, 1909.			Dis-chargd	Average days in Hos-pital.	Died.	Average days in Hos pital.
	Total	Recovered	Died	Total	Recovered	Died	Total	Recovered	Died				
Scarlet Fever	1	1	..	32	31	1	12	12	..	31	40.9	1	under 1 day
Diphtheria	..	..	..	4	4	..	..	..	..	4	39.5	..	..
Other Diseases	..	..	..	2	2	..	..	..	..	2	3	..	..
Totals	1	1	..	38	37	1	12	12	..	37	..	1	1

* The total number of days in Hospital of the case of Scarlet Fever remaining over from 1907 was 43.

The following tables show the case mortality per cent. of cases treated in the City Isolation Hospital since the year 1893, compared with cases treated in the Metropolitan Asylums Board Fever Hospitals.

SCARLET FEVER.

	Hereford City Hospital.			*London Fever Hospitals.*
5 Yearly Periods.	*Admissions.*	*Deaths,*	*Case Mortality per cent.*	*Case Mortality per cent.*
1893-1897	179	3	1.6	5
1898-1902	132	2	1.5	3
1903-1907	140	7	5	3
1893-1907	451	12	2.66	3.8

DIPHTHERIA.

1893-1897	1	1	50	23
1898-1902	3	1		13
1903-1907	76	8	10.5	9

The decreased rate in the case mortality from Diphtheria during the last 10 years is due to the antitoxin treatment. At the Brook Fever Hospital (Metropolitan Asylums Board) in London, statistics have been kept showing the case mortality from Diphtheria according to the day of admission. Particulars are as follows:—

	Mortality per cent. in cases treated years 1897–1907.
Cases treated on 1st day	0
,, ,, 2nd ,, ...	4.29
,, ,, 3rd ,, ...	11.24
,, ,, 4th ,, ...	16.89
,, ,, 5th ,, and afterwards	18.58

The mortality of cases of Scarlet Fever and Diphtheria treated in the City Hospital is comparatively low. Some of the cases of Scarlet Fever and more particularly of Diphtheria have been sent in a moribund condition, when very little could be done for them. It is most important, as the above table shows, that antitoxin should be injected as early as possible after the onset of the disease, in cases of Diphtheria, and the longer treatment is delayed the greater the mortality.

DISINFECTION.

The following are particulars in regard to disinfection of houses and bedding :—

Disinfection.	*Houses*	*Bedding.*
After Scarlet Fever and Diphtheria	76	64
,, Phthisis	8	—
,, Measles	1	—
,, Cancer	1	1
Other disease	—	1

The whole of the bedding and the following articles were disinfected by steam :—

4 rolls of felt.
1 lot of sacking.
2 carpets.
4 rugs.
7 cushions.
48 articles of clothing.
Miscellaneous, 22.

The rooms were disinfected with formalin vapour.

St. Peter's Infants' School was sprayed with disinfectant after being closed on account of scarlet fever.

A house in Little Berrington Street was washed down with disinfectant. A large quantity of disinfectant has been supplied free at the Health Office and Corporation yard.

PHTHISIS.

Thirty-one deaths occurred during the year, 19 males and 12 females.

The ages at death were as follows :—

Years	0–1		1–5		5–15		15–25		25–65		65 *and over*	
	M	F	M	F	M	F	M	F	M	F	M	F
	0	1	1	0	0	2	5	2	12	7	1	0

There were 15 deaths in Ledbury Ward, 10 in Leominster Ward and 6 in Monmouth Ward ; 7 deaths occurred in the Workhouse, 2 in the General Hospital, and 1 in Burghill Asylum.

The deaths were fairly evenly distributed over the four quarters of the year, there being eight in the first, nine in the last, and seven in the second and third quarters.

The Phthisis rate per 1,000 of the population was .98, compared with 1.22 for the previous 10 years.

Occupation. Males.— General labourers, 4 ; stationers' assistants, 2 ; and one each of the following :—photographer's assistant, coalminer, salesman, farm labourer, carpet weaver, journeyman tailor, hawker, electrician, shoemaker, grocer's assistant, bricklayer. A male, 19 years, of independent means, followed no occupation. The other male was aged four years.

Females.—No occupation was followed by any of the females. They belonged to the working class.

During the last quarter of the year I visited 6 houses after deaths from the disease and obtained the following particulars :—

(1) Female, 58 years of age : illness had lasted four years. There was no family history of consumption. Deceased had been a nurse before her marriage and had attended cases three years before her death. She was said to have had a sound constitution. She had been temperate and there was no history of any recent severe illness prior to the onset of the disease. Infection was probably brought about in this case through attendance on Consumptive persons.

(2) Male, 37 years; illness had lasted several years. Was a shoemaker by trade. I visited the workshop and found it was badly ventilated, although means for ventilating it efficiently were present. Deceased had never been strong. Was temperate.

(3) Female, 26 years. Illness said to have lasted a few months. There was no family history of consumption in this or the preceding case. Had been married for two years; previous to her marriage had been a dressmaker for nine years, but had not followed this occupation since. Weakness after a confinement was probably the chief predisposing cause. Deceased had been temperate.

(4) Female, 19 years. Had been ill five months. Grandmother on father's side had died from the disease. Had followed the occupation of dressmaker for two years and three months previous to death: latterly had worked for very long hours. Was a total abstainer. In this case there was an hereditary tendency to the disease.

(5) Female, 11 years. Illness had lasted 12 months. Had left school 12 months. Was never strong. There was a family history of consumption as follows :—Uncle, father's side, and also relatives on mother's side.

(6) Male, 34 years. Illness had lasted four years. Father had died from the same disease. Occupation of deceased, grocer's assistant. Had been temperate.

The sanitary arrangements of the houses was on the whole good and there was no overcrowding. Four of the houses contained two living rooms and three bedrooms, and the other two houses, two living rooms and two bedrooms. One house was damp in places owing to a defective roof : in another house the eaves-spouting of the back kitchen roof was defective.

Precautions taken.—In three of the cases a separate bedroom had been used by deceased. Expectoration in three of the cases had been received into a cup containing disinfectant, in two cases into a cup containing water ; the vessel was cleansed and scalded daily.

In the remaining case rags were used and afterwards burnt.

One bedroom was disinfected by relatives of deceased with sulphur ; another room was fumigated with formalin by the Health Department.

PHTHISIS IN HEREFORD DURING THE YEARS 1898–1907.—In order to obtain information respecting the disease in the town, I have obtained statistics for the last 10 years; during this period 247 deaths occurred, 148 of males and 99 of females.

The ages at death were as follows :—

Years—0–1		1–5		5–10		10–15		15–20		20–25	
M	F	M	F	M	F	M	F	M	F	M	F
4	1	3	3	4	2	1	5	6	11	14	13

25–35		35–45		45–55		55–65		65 *& over*	
M	F	M	F	M	F	M	F	M	F
33	19	36	31	29	8	16	4	2	2

One and a half times as many deaths occurred among males as females.

Up to the age of 25 years the deaths were fairly equally distributed among the sexes. After the age of 25 there were more deaths among males ; thus between the ages of 25 and 45 years, 69 deaths occurred among males and 50 among females ; between 45 and 65 years, 45 among males and 12 among females.

In Hereford City the higher rate among males as compared with females is accounted for probably by the effect of occupation, as only a comparatively small number of females follow occupations compared with males. Intemperance and other factors would also come in.

It will be noted that more than half the deaths occurred between 25 and 45 years, two-thirds from 15 to 45 years ; over half occurred at the most useful period of life.

Eleven deaths occurred under the age of five years, and 17 under the age of 10 years.

There were 73 deaths attributed to Ledbury Ward, 91 to Leominster Ward, and 56 to Monmouth Ward.

Thirty deaths occurred in the Workhouse, 21 males and 9 females. Sixteen of these have been allotted to the various Wards and 15 deaths occurred in the General Hospital, 9 males and 6 females. Two of these have been allotted to the respective Wards.

Occupation. Males :—132 followed occupations as follows :

Outdoor, 48.—Gardeners 2, farm labourers 7, general labourers 25, cabmen 4, carter 1, vanman 1, tram conductor 1, cattle dealers 2, railway porter 1, hawkers 4.

Trades, 26.—Upholstery 1, plasterer 1, plumbers 3, basket maker 1, printers 2, painters 3, gunsmith 1, cabinet maker 1, tinworker 1, cooper 1, sheet maker 1, skinner 1, joiners 6, organ builders 2, bookbinder 1.

Shops, 21.—Clothiers 2, draper 1, general 1, boot 4, bakers 3, butcher 1, tailoring 2, grocery 1, tobacco 1, fishmonger 1, hairdressers 4.

Clerks, etc., 8.—Clerks 7, accountant 1.

Engine-drivers, etc., 6.—Railway engine driver 1, engine cleaner 1, engine fitter 1, railway fireman 1, stationary engine driver 2.

Hotel business, etc., 5.—Innkeepers 2, hotel keepers 2, brewer's porter 1.

Servants, 5.—Lodgekeeper 1, ostler 1, grooms 2, boots 1.

Pensioners etc., 4 —Army 2, Navy 1, seaman, Navy, 1.

Miscellaneous, 9.—Stonemasons 4, wheelwrights 2, schoolmaster 1, manager mineral water works 1, commercial traveller 1.

Females.—Fifteen followed occupations as follows :—

Servants 9.

Shop (millinery) 1.

Trade (upholstery) 1.

Clerk 1.

Miscellaneous.—Ship stewardess 1, charwoman 1, schoolmistress 1.

Phthisis causes a high mortality among debilitated persons, those exposed to the weather, to hot or impure air and certain forms of dust. Statistics for the whole of England and Wales show that hawkers, cutlers, file-makers and printers suffer a high mortality from the disease.

Among stone-masons the death-rate is high owing to the inhalation of hard angular particles. Hairdressers, joiners and others also suffer through inhalation of dust. The death-rate from Phthisis is also high amongst innkeepers and hotel-keepers. Those employed in shops have a relatively low mortality : grocers suffer much less than drapers and tailors.

In certain occupations intemperance rather than the occupation itself predisposes to the disease.

Gardeners and those employed in agricultural work suffer a low mortality from the disease.

In the City there are comparatively few occupations which of themselves would predispose to the disease. In regard to employment in shops and workshops, the healthiness of the occupation will depend on the means taken for efficient ventilation; and in regard to other occupations on the habits of the persons employed.

Enquiries into the residence of persons who died from the disease showed the following :—

Number of deaths..	10	8	6	5	4	3	2	1	*Total*
Streets...........	1	1	4	5	11	10	16	29	77
TOTAL............	10	8	24	25	44	30	32	29	202

In addition 30 deaths occurred in the workhouse and 15 in the General Hospital.

The following is a list of streets in which the cases occurred :—

10. Bewell Street.

8 Catherine Street.

6. Eign Street, Millbrook Street, Green Street and Wye Street.

5. Gaol Street, Stanhope Street, Ledbury Road, Belmont Road, Whitecross Road.

4. Whitecross Street, Commercial Road, Commercial Street, Edgar Street, Ross Road, St. Owen Street, Berrington Street, Friar Street, Newmarket Street, Bath Street, Widemarsh Street.

3. Newtown Road, Cotterell Street, West Street, Burcott Road, Little Berrington Street, Cornewall Street, Ryelands Street, Eign Hill, Aylstone Hill, Park Street.

2. Bryngwyn Terrace, Chandos Street, Canonmoor Street, Barr's Court Terrace, Cross Street, East Street, Bridge Street, Highmore Street, Blackfriars Street, Grandstand Road, St. Martin Street, Church Street, Vaga Street, Maylord Street Blue School Street, Grove Road.

1. Huntington Court, Hinton Road, Grenfell Road, Ingestre Street, Monkmoor Street, Eign Road, Hampton Street, Foley Street, Aubrey Street, King Street, Moorfield Street, Brighton Terrace, Clive Street, Old Friars, Gomond Street, Folly Lane, Barr's Court Place, Cottage in Holmer, Richmond Street, Church Road, St. James Road, Westfaling Street, Villa Street, Canal Street, Huntington Lane, Baysham Street, Castle Street, Portfield Street, Portland Street.

The 202 deaths occurred in 77 streets and as there are 137 streets in the town, there were 60 streets in which no deaths occurred. It is also interesting to note that half the deaths occurred in 20 streets, a little over one-seventh of the total number of streets in the City, and three-quarters of the deaths in 37 streets.

It was found that in eight streets two deaths from the disease had occurred in the same house:—

Street.	*Year or Years.*
Berrington Street	1902 and 1905.
Commercial Street	1901 and 1902.
Blackfriars Street	1902 and 1905.
Bewell Street	1898 and 1900.
East Street	1901 and 1907.
Maylord Street	Both in 1906.
Wye Street	1903 and 1904.
Vaga Street	Both in 1905.

Further enquiries showed that a male, 29 years, died in a house in Blackfriars Street on Aug. 20th, 1902, and his wife aged 29 years, died in the same house on Sept 6th, 1905.

A female, 22 years, died in a house in Maylord Street, on March 12th, 1906, and her mother, aged 41 years, on September 22nd the same year.

A male, aged 15 years, died in a house in Vaga Street on May 21st, 1905, and his brother died in the same house on September 24th, 1905.

Particulars of the above cases point strongly to the infection having been conveyed from person to person. There can be no doubt that this is not uncommon where persons live in the same house with Consumptives.

It is well known that the germs of Consumption can survive in houses in dark corners for long periods of time, and probably infection was brought about in such a way in some of the cases referred to above.

The disease is also conveyed to healthy persons who visit others with Phthisis, and in certain streets deaths from the disease occurred in houses next door to one another or adjacent:—

	Number.	
Street.	*Next door.*	*Adjacent.*
Eign Street	1	0
Millbrook Street	1	0
Wye Street	1	0
St. Owen Street	1	0
Newmarket Street	0	1
Little Berrington Street	1	0
Church Street	1	0
Bewell Street	1	1

It is interesting to note that all the houses in which deaths occurred in Bewell Street and all but three in Catherine Street have been condemned as unfit for habitation.

Of the three remaining houses in Catherine Street in which deaths occurred, extensive repairs have been considered necessary to render the houses fit for habitation. Two out of the three houses in Little Berrington Street have been condemned, as well as one house in St. Owen Street, and one each in East Street, Canal Street, Cross Street, Edgar Street and Villa Street.

In addition, one house in Gaol Street and a house in Bridge Street might also have been added to the list of condemned houses

It is well known that insanitary surroundings lower the health and predispose to the disease.

I have calculated the Phthisis rates per 1,000 of the population at different age periods for the years 1901–05 and comparison is made with rates for the same periods for England and Wales.

Years.	1901–05 *Males rates.*		*Females rates.*	
	Hereford.	*England and Wales*	*Hereford.*	*England and Wales*
0–5	.36	.36	.00	.31
5–10	.52	.14	.17	.19
10–15	.16	.17	.35	.40
15–20	.58	.76	1.02	.97
20–25	2.29	1.57	1.24	1.22
25–35	1.70	2.10	1.05	1.54
35–45	2.29	2.68	2.40	1.73
45–55	2.31	3.04	.56	1.43
55–65	2.23	2.50	.74	1.11
65 and over	.33	1.30	.76	.67
All ages	1.35	1.43	.89	1.009

In comparison with the whole of England and Wales, the death-rate from Phthisis of males at all ages is less in Hereford, this diminution occurs at ages 15–20, 25–35, 35–45, 45–65 and 65 and over. It is higher from 5–10 years, and from 20–25 years.

Comparing females the rate in Hereford is lower for all age periods except 15–20 and 35–45 years.

If allowance were made for the smaller percentage of males from 15–45 in Hereford and the larger proportion of females at all age periods, the rates would be more approximate to those of England and Wales.

The following Table shows the death-rates per 1,000 for the City and England and Wales since 1876 :—

	Hereford		*England & Wales*
Period.	*number of deaths.*	*rate per* 1,000.	*rate per* 1,000.
1876–80......	163	1.7	2.03
1881–85......	163	1.6	1.8
1886–90......	121	1.2	1.6
1891–95......	152	1.4	1.4
1896–1900....	141	1.3	1.3
1901–1905....	120	1.1	1.2

The death-rate from Phthisis for England and Wales has declined nearly 50 per cent. since 1876; the death-rate for the City has not declined at the same rate.

During the last year 42 deaths occurred from Phthisis and other forms of Tuberculosis out of a total of 327 deaths; with the exception of Heart Disease, which was responsible for 47 deaths, the largest number of deaths occurred from Tuberculosis.

OTHER FORMS OF TUBERCULOSIS.

Eleven deaths occurred during the year from other forms of Tubercular disease than Phthisis, four were males and seven females; the rate was .49 per 1.000 of the population, compared with a rate of .52 for the previous ten years and .31 for last year.

The ages were as follow :—

Years	0–1	1–5	25–35	45–55
	3	6	1	1

Nine deaths occurred under the age of five years.

The deaths were due to Meningitis 4, Peritonitis 4, Abdominal Tuberculosis 2, and Enteritis 1.

The tables I have given in connection with Infantile Mortality show that during the five years 1901–05, the death-rate under one year per 1,000 births was higher in Hereford as compared with England and Wales.

The rates were 9.2 for Hereford and 5.9 for England and Wales.

The average rate for the City for the years 1898–1907 was slightly less, 8.6.

Methods of Prevention of Phthisis and other Tubercular Diseases.—There can be no doubt that improved sanitation has brought about a decrease in the mortality from Phthisis, and in Hereford much good is bound to follow the clearing away of insanitary property in the city.

In regard to other factors affecting the disease, in Hereford there are no industrial occupations which have a detrimental effect on the health.

Investigations which have been made show that in probably not more than a third of cases of Consumption is there a family history of the disease; it is, therefore, largely preventible.

It is important that all workshops and such like places should be properly ventilated and, in addition, more light and air should be allowed to enter some houses. In many cases among the lower classes windows are not opened. As in most cases the disease is conveyed in dried particles of expectoration containing the germs, it is most important that spitting should be prevented; notices should be posted in workshops, public-houses and public places calling attention to the desirability of avoiding spitting.

In public-houses it would be an improvement if the spittoons instead of containing sawdust contained some liquid disinfectant, dried particles of dust would not then be conveyed about. The floors should also be washed daily with disinfectant solution.

In regard to Phthisis and other forms of Tuberculosis in young children there can be no doubt that the disease germs are largely conveyed in milk.

In regard to Consumptives themselves, instructions are necessary in regard to isolation, destruction of the sputum and other matters. During the year, disinfection was offered after deaths from the disease, but only accepted on the part of the relatives in eight cases.

No system of Notification of the disease has been adopted for the City. At the time of writing the new regulations of the Local Government Board in regard to the Notification of cases under the control of the Poor Law Authorities have come into force.

A limited amount of accommodation is available in the General Hospital, and a larger amount of accommodation in the Workhouse for the reception of cases of Phthisis.

CANCER.

There were 19 deaths from the disease during the year, seven of males and twelve of females.

The ages were as follows:—

35–45	45–55	55–65	65–75	75 *& over*
2	4	6	6	1

The majority of the deaths were of persons over 45 years.

The death-rate was .85 per 1,000 of the population compared with .97 for Cancer and other malignant disease during the years 1898–1907 (other malignant disease only formed a very small proportion of the deaths). The average cancer mortality for England and Wales for the years 1901–05 was .86 per 1,000.

The parts affected are shown in the table :—

Part.	*Males.*	*Females.*	*Total.*
Breast	0	4	4
Reproductive Organs	0	4	4
Bowels	1	3	4
Stomach	2	0	2
Liver	3	1	4
Other parts	1	0	1
TOTAL	7	12	19

RESPIRATORY DISEASE.

During the year there were 18 deaths from Bronchitis 15 from Pneumonia, 1 death from Pleurisy and 2 deaths from other Respiratory Disease, giving a Respiratory death-rate per 1,000 of 1.61, compared with 2.29 for the previous 10 years.

Bronchitis caused 8 deaths among males and 10 among females; Pneumonia, 9 deaths among males and 6 among females; the ages are given below :—

Years	0–1	1–5	5–15	15–25	25–65	65 *& over*
Bronchitis	4	2	1	1	4	6
Pneumonia	1	2	0	0	11	1

Deaths from Bronchitis mostly occur among infants and old persons, and deaths from Pneumonia mostly between the ages of 25 and 65.

The following are the Respiratory rates since the year 1876 :—

Period.	*Number of deaths.*	*Rate per* 1,000.
1876–1880	321	1.6
1881–1885	280	1.4
1886–1890	328	1.6
1891–1895	393	1.9
1896–1900	246	1.16
1901–1905	265	1.2
1906	36	1.6
1907	51	2.2

The Respiratory rate has shown a decrease since 1896, the higher rate for the year 1907 would be partly accounted for by the increase in Measles.

ALCOHOLISM.

No deaths were attributed to Alcohol during the year but three deaths occurred from Cirrhosis of the Liver, which is generally caused by Alcohol; all were males, aged 49, 51 and 71 respectively.

One was a butler by occupation, and another a wheelwright, in the third case the occupation was not stated.

There was one death in each of the Wards.

I have ascertained the following particulars of deaths from Alcohol and Cirrhosis of the Liver for the years 1898–1907 :—

ALCOHOLISM.—Nine deaths : five males and four females.

Males—Ages 50, 55, 58, 66 and 67.
Females—Ages 38, 44, 46 and 50.

CIRRHOSIS OF LIVER.—Fifty deaths, 21 males and 29 females.

Ages	0–1	1–5	5–10	25–35	35–45	45–55	55–65	65 *& over*
Males	1	1	1	0	4	3	5	6
Females ..	0	0	1	1	3	9	4	11
TOTAL	1	1	2	1	7	12	9	17

Twenty deaths occurred from 25–55 years.

There were more deaths among females than males.

OCCUPATION.

DEATHS FROM ALCOHOLISM.—*Males*—Army pensioner (1), innkeeper (1), journeyman tailor (1), labourer (1) (previously a clerk), 1 was of independent means.

CIRRHOSIS OF THE LIVER.—*Males*—Innkeepers (3), retired innkeeper (1), brewer's traveller (1), farmer (1), retired farmer (1), farm labourer (1), painter and plumber (1), grocer's assistant (1), tailors (2), coach painter (1), mason (1), assistant overseer (1), Army pensioner (1), independent means (2) ; total, 18.

None of the females followed any occupation.

A large number of the deaths occurred at the most useful period of life.

The following table shows the death-rate per 1,000 of the population above the age of 25 years from the two diseases for the years 1901–05 :—

Mortality per 1,000 at ages above 25 years :—

		Hereford City.	*England & Wales.*
Males—	Alcoholism	.08	.19
	Cirrhosis of Liver	.29	.29
Females—	Alcoholism	.06	.128
	Cirrhosis of Liver	.36	.21

The death-rates from Alcoholism for the City are lower than those for the whole of England and Wales.

In the case of males the death-rate from Cirrhosis is the same, and that for females is higher for the City.

COWSHEDS AND DAIRIES.

There are the names of 13 persons on the Register who keep dairies, 24 who have cowsheds and 29 milkshops. In addition 55 purveyors of milk are registered, of whom 21 bring in milk from outside the city.

129 visits were paid to cowsheds, milkshops and dairies during the year, and in the last quarter I visited the majority of the cowsheds along with the Sanitary Inspector.

The majority of the cowsheds were kept clean and only three notices were served for breaches of the regulations. Two notices were still uncomplied with at the end of the year.

About one-third of the cowsheds are unsatisfactory, either from a structural point of view, or more particularly in regard to lighting, ventilation, etc. It is impossible to keep old woodwork and unfinished roofing in a cleanly state, and cows cannot be kept clean if the floors are not properly paved.

From enquiries made, it was ascertained that the number of milking cows in the City is probably 250. The number varied from 2 to 35 cows ; 13 farms averaged 16 each.

There are probably over 200 cows in outside districts, the milk of which is sold in the town.

In addition to cleanliness of the cowsheds, it is important that the cows should be regularly groomed and that the hands and clothing of the milker should be clean.

In 1899 Model Regulations were issued by the Local Government Board in regard to Dairies, Cowsheds and Milkshops, and the following appears in Part III., which refers to "precautions to be taken by Purveyors of milk and Persons selling milk by retail against infection or contamination." (Art. 13, D. C. & M. Order. 1885.)

"He shall not cause or suffer any cow belonging to him or under his care or control to be milked for the purpose of obtaining milk for sale :—

(*a*) Unless, at the time of milking, the udder and teats of such cow are thoroughly clean ; and

(*b*) Unless the hands of the person milking such cow, also, are thoroughly clean and free from all infection and contamination."

It is important that cows which are tuberculous, with or without local affection of the udder, should be excluded from milking herds.

The statement of Professor Koch in 1901 that human and bovine tuberculosis were one and the same disease was not generally accepted at the time and it was on this account that a Royal Commission was appointed to investigate the matter. Early in 1907 a Second Interim Report was issued by the Commission; their conclusions are given in the following words :—

"There can be no doubt that in a certain number of cases the tuberculosis occurring in the human subject, especially in children, is the direct result of the introduction into the human body of the bacillus of bovine tuberculosis ; and there also can be no doubt that in the majority, at least, of these cases the bacillus is introduced through cows' milk. Cows' milk containing bovine tubercle bacilli is clearly a cause of tuberculosis and of fatal tuberculosis in men."

It has been argued that the bacilli of tuberculosis are only present in the milk when the udder is diseased and that when the udder is free from tubercular disease, although there are other lesions in the body of the animal, no bacilli are present in the milk, this has been disproved by experiments made by the Royal Commission and some conclusions on these points are given in a third Interim Report which was issued early in 1909 ; the conclusions are so important that I am inserting them here.

"None of the cows investigated showed any sign of disease of the udder during life, and in all, after slaughtering, the udder was carefully examined for tuberculous lesions and tubercle bacilli. No tuberculosis was found except in one case, in which one-quarter of the udder showed four small nodules. These could not possibly have been detected during life.

"We found that the milk of the cows obviously suffering from tuberculosis contained tubercle bacilli, whether the milk was obtained in the ordinary way or was withdrawn from the teat by means of a sterilised catheter. The presence of tubercle bacilli in the milk of cows clinically recognisable as tuberculous confirms the opinion we expressed in our Second Interim Report, that the milk of such cows must be considered dangerous to human beings."

Post mortem examination of the cows referred to showed extensive tuberculosis.

Other experiments were made with regard to the infectivity of the excreta of tuberculous cows. The Commission report as follows :—

"Cows suffering from extensive tuberculosis of the lungs must discharge considerable numbers of bacilli from the air passages in the act of coughing, and some of the bacilli thus expelled may find their way into the milk. But our experiments indicate that the excrement of cows obviously suffering from tuberculosis of the lungs or alimentary canal must be regarded as much more dangerous than the matter discharged from the mouth or nostrils. We have found that even in the case of cows with slight tuberculous lesions tubercle bacilli in small numbers are discharged in the faeces, while as regards cows clinically tuberculous our experiments show that the faeces contain large numbers of living and virulent tubercle bacilli."

COMMON LODGING HOUSES.

There were five registered Common Lodging Houses in the city at the end of the year.

The house in Berrington Street was closed by a Magistrates' Order under the Housing of the Working Classes Act, 1903, Sect. 8, as unfit for habitation.

The tenant of *22 Bewell Street was under notice to vacate the house at the end of the year.

The following was a complete list at the end of the year 1908, with the number of lodgers in each house :—

Date of Registration.	*Situation.*	*No. of Lodgers.*
Dec. 21, 1875	7, Little Berrington Street	16
Dec. 22, 1875	22, Bewell Street	30
1889	Rear of 37, St. Owen Street	6
Nov. 11, 1889	38, St. Owen Street	21
Dec. 15, 1887	39 and 41, St. Owen Street	20
	TOTAL	93

No cases of infectious disease have occurred in any of the houses during the year.

I quite agree with what has been said in previous reports in regard to the houses, they ought not to have been registered for the purpose and are unsuitable for Common Lodging Houses. I am prepared to certify these houses as unfit for habitaion under the Housing of the Working Classes Act, 1890.

There were seven Common Lodging Houses in 1905, and at the time of writing there are four left.

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* This house was burnt down on January 7th, 1909.

In a town the size of Hereford it is necessary that there should be suitable Common Lodging House accommodation. There will always be a certain number of persons who habitually reside in such places, and it is better to have persons of this class under observation than distributed over the town through want of suitable accommodation.

There are several buildings in the town in the neighbourhood of the present houses, which at a reasonable cost could be converted into Common Lodging Houses. Such houses would not necessarily attract vagrants and others into the town.

In the case of Infectious Disease, more particularly Smallpox, under Section 84 of the Public Health Act, 1875, the keeper of a Common Lodging House is required to give notice to the Medical Officer of Health of Infectious Disease in his house, and under Section 83 the Sanitary Authority may require the keeper to make returns of persons who have slept there the previous night.

HOUSING.

The accompanying Table indicates that certain parts of the centre of the city are congested, whilst some of the rural parts of the city are only sparsely populated; thus the parishes of St. John and St. Peter are most thickly populated, whilst in the parishes of Huntington and the Vineyard there is less than one person to the acre.

For the year 1908, the number of persons per acre for the whole city was 4.44, whilst for the three Wards, Ledbury, Leominster and Monmouth it was 7.15, 4.02 and 3.09 respectively.

A recent map which shewed the division of the city into two portions, Urban and Suburban, for the purposes of new byelaws for the suburban portion, gave particulars with regard to the population in each portion.

The particulars are as follows:—

Portion.	*Population* (1901)	*Area in acres.*	*Persons per Acre.*
Urban	11,706	448	26.1
Suburban ..	9,676	4,583	2.1

In regard to the number of persons per house in each of the parishes, it is not excessive in any of them. The number in St. John's is fairly high and also singularly in Huntington, although there is not one person to the acre :—

CENSUS 1901.

Civil Parishes of	*Population.*	*Area in acres.*	*Persons per acre.*	*Inhabited houses.*	*Persons per house.*
All Saints	5,788	376	15.3	1287	4.4
Holmer Within....	1,952	1157	1.6	406	4.8
Huntington	128	556	under 1	24	5.3
St. John the Baptist	941	41	22.9	171	5.5
St. Martin	1,593*	1146	1.3	346	4.6
St. Nicholas......	2,715†	560	4.8	598	4.5
St. Owen.........	4,458	293	15.2	968	4.6
St. Peter..........	2,614	75	34.8	519	5.0
The Vineyard.....	13	15	under 1	3	4.3
Tupsley	1,180‡	812	1.4	243	4.8
TOTAL	21,382	5031	4.2	4565	4.68

The number of houses built since 1900 is shown in the accompanying table for which I am indebted to the City Surveyor.

Since April 1st, 1901, up to the end of last year 373 new houses had been erected. and a certain number had been demolished, closed or are now used for other purposes (probably 56).

Several instances of overcrowding have been noticed during the past year.

There can be no doubt that there is a demand for houses among the working classes.

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* Includes 50 persons in 11 houses in part of Bullingham Parish, included in Monmouth Ward

† Includes 7 persons in 2 houses in part of Breinton Parish, included in Monmouth Ward.

‡ The 1,180 in Tupsley Parish constitute 1,120 in Ledbury Ward, and 60 in Leominster Ward.

Date.	New Houses for which Plans have been approved.	Other Buildings.	New Houses completed and inspected.	Other Buildings.
During the Year 1901	79	6	43	7
,, ,, 1902	78	6	36	6
,, ,, 1903	50	12	65	11
,, ,, 1904	51	16	50	8
,, ,, 1905	69	5	38	4
,, ,, 1906	78	14	72	14
,, ,, 1907	50	20	60	14
,, ,, 1908	45	32	15	23

The number of new houses built in each Ward during 1908 was as follows :—

Monmouth Ward.	Ledbury Ward.	Leominster Ward.
1.	4.	10.

HOUSING OF THE WORKING CLASSES ACTS, 1890 & 1903.

During the year some of the worst property in the town, viz., Bewell Street area, was demolished or in process of demolition. A large amount of work has been done under the direction of the Housing Committee and their Chairman, Councillor E. F. Bulmer, J.P., to whose energy, as Chairman and more recently as Mayor, a large amount of the success of the various schemes is due. A detailed account of the work which has been carried out during 1908 is given in the following table, which has been prepared for me by the Sanitary Inspector.

Housing of the Working Classes Acts, 1890 to 1903.

33, Canal Road	Specification of works prepared by City Surveyor and carried out Feb., 1908.
1, 2, 3 and 4, Waterman's Court, Saint Martin Street.	Ditto.
1, Friars Street	Demolition Order made January 7th, 1908. Top storey taken off and remainder used as warehouse February, 1908.

21, Berrington Street	Converted into warehouse March, 1908, after Closing Order under Section 32, 1890 Act.
22, ditto	Converted into stable and warehouse March, 1908, after Closing Order under Section 8, 1903 Act.
53, ditto (Common Lodging House.)	Closing Order obtained by consent under Section 8. 1903 Act, April 23. 1908. (Now used as a warehouse.)
7, Whitefriars Street	Closing Order obtained January 23rd, 1908, under Section 32, 1890 Act. Certain temporary repairs carried out and Order rescinded by Justices May 14th after opposition.
13 and 14, Little Berrington Street.	Demolition Order made January 7th, 1908, not complied with, but alterations and repairs carried out at a cost of £160 in accordance with specification and plan submitted by architect, June, 1908.
15, ditto	Demolition Order made January 7th, 1908. Dangerous portions demolished June, 1908.
20, Berrington Street	Closed voluntarily and partly demolished June, 1908.
78 and 79, St. Owen Street	Demolition Order made October 1st. 1907. Complied with and site cleared June, 1908.
34, 35, 36, 38, 39 and 40, Catherine Street.	Demolished and stabling erected for public-house adjoining, July, 1908.
1 and 2, rear of 23, Gaol St.	Demolition Order made August 4th, 1908, and notice served.
1, 2 and 3, rear of 24, ditto	Demolition Order made August 4th, 1908. Notice not served owing to owner's address being unknown.
Bewell Street Improvement Scheme.	Demolition of 25 houses including a Common Lodging House, commenced November, 1908.

Altogether 17 houses were demolished, including 9 houses in the Bewell Street scheme; in addition portions of 15, Little Berrington Street, and 20, Berrington Street, which were dangerous, have been removed.

Demolition orders have been served on the owners of two houses and are about to be served on the owners of other three houses. Five houses are not now used as dwelling-houses, having been converted into warehouses in three instances, and in addition one house has been converted into a stable and warehouse and the remaining house into a stable.

Alterations have been carried out in the case of three other houses, in one case the specification was sent by the City Surveyor.

I have prepared a table showing what action had been taken up to the end of the year (1908) in regard to the 156 houses which were represented to the Housing Committee as unfit for habitation. Seventy-seven have been dealt with, and of the remaining 79, I am of opinion that 23 can be suitably altered and made fit for habitation. (At the time of writing a specification in regard to the work required has been sent to the owner of three of the houses and a letter to the owner of four other houses.) Four houses have already been suitably altered, and in addition 21 houses have been altered by the owners without receiving a specification sent by the City Surveyor and approved by the Housing Committee. In certain cases the alterations are not complete, and it would save owners further trouble in the future if they would submit plans before having the work of alteration started. In several instances, houses which have been renovated in the past have since had to be closed; for example, 53, Berrington Street, which is now used as a warehouse, and 21, Berrington Street, used as a petrol store. Particulars are also given in regard to 23 houses which were added to the list of 156 houses from time to time.

WORK DONE UNDER THE HOUSING OF THE WORKING CLASSES ACTS, DURING 1907 AND 1908.

Demolished	Partly Demolished	In process of Demolition	Demolition Orders served	Orders to be served.	Houses Closed.	Closed and in use for other purposes	Altered after notice	Altered without notice	Remaining to be dealt with	Total
19	1	16	3	2	6	5	4	21	79	156
7	1	4	—	—	—	—	3	8	—	23
26	2	20	3	2	6	†5	7	29	79	179

† Warehouses. 1 Petrol Store. 12 Warehouse and Stabling. 1 Joiner's Shop

HOUSING WORK CARRIED OUT DURING THE YEARS 1899-1906.

Previous to the Housing Committee being formed, on January 18th, 1907, 67 houses during the years 1898-1906 had been brought to the notice of the Sanitary Committee under the Housing of the Working Classes Acts as unfit for habitation: of these 17 were demolished, 25 closed, and in regard to other 25 houses alterations were carried out after notice by the owners, but these in certain cases did not prove satisfactory. Of the 25 houses which were closed, 15 have since been represented to the Housing Committee and are included in the list of 156 insanitary houses which was brought to their notice. Eight have since been demolished, 7 under the Bewell Street scheme and 36, Catherine Street; 20, Berrington Street is partly demolished; demolition orders have been served in regard to 1, 2 and rear of 23, Gaol Street, and orders are about to be served on 1, 2, and 3, rear of 24, Gaol Street, when the address of the owner is ascertained. Nine houses are used as stores, warehouses, &c.

ST. OWEN STREET SCHEME.

(Not included in the above list.)

This scheme dealt with 32 houses which were demolished in 1901, under Part II. of the H.W.C. Act, 1890, and in place of which 21 new houses were built by your Council.

RECENT HOUSING SCHEME.

1. *Bewell Street Area.* 2. *Barr's Court Estate.*

1. BEWELL STREET AREA.—A report was submitted by the Housing Committee to the Council in May, 1907. The scheme was adopted by the Council Nov. 9th, in the same year,

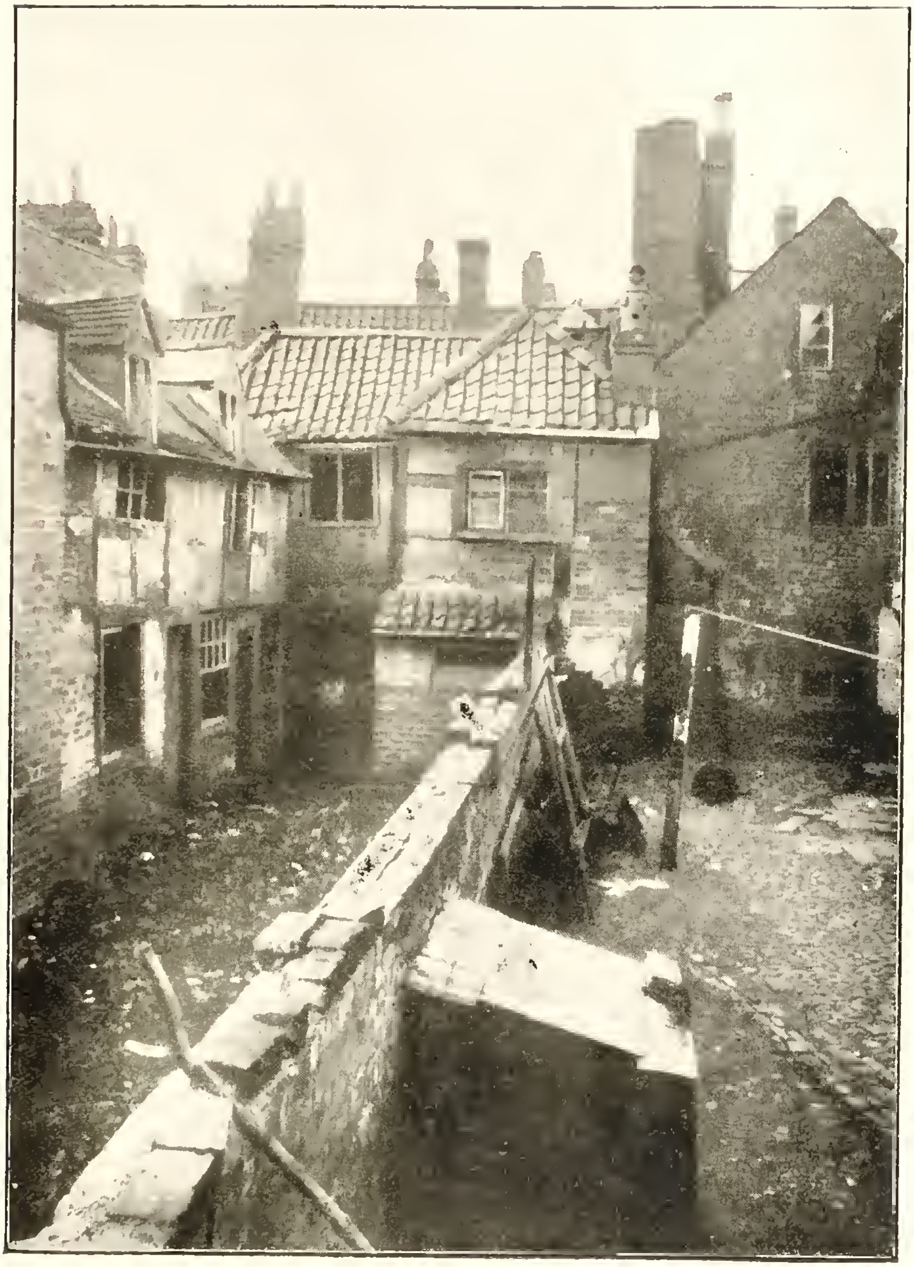
The Bewell Street area occupies 1,879 square yards in the centre of the City, and included in it are 25 dwelling houses with a population of 41 persons, and a Common Lodging House, 22 Bewell Street (since burnt down, January, 1909) with accommodation for 30 adults.

At the end of the year 9 houses had been demolished.

The photo-reproduction shows Nos. 1 and 2, Sheriff's Court, rear of Nos. 23 and 24, Bewell Street, and the rear of the Common Lodging House, referred to above.

Sixteen more houses are in process of demolition, and it is proposed to alter Nos. 29 and 30, Bewell Street.

A road is to be made through the area from Bewell Street to Wall Street (now commenced) and it is proposed by your Council to lease the remainder of the site under Sect. 5 (1), H.W.C. Act, 1890, Part III. on condition that the lessee erects thereon workmen's dwellings; in addition a portion of the ground, about one-eighth of the whole area, is to be used for the purpose of a playground.



Nos. 1 and 2, SHERIFF'S COURT

AND

Rear of Nos. 22, 23 and 24, BEWELL STREET.

There will be provision on the site for the erection of 21 dwellings.

Part 2. Barr's Court Estate.—A scheme was prepared by your Council in connection with this estate in order to provide accommodation for those persons displaced from the Bewell Street area and from other houses which have been closed or demolished, and to allow further action to be taken in the future in regard to other insanitary property, which cannot very well be dealt with at present owing to the scarcity of working-class houses in the town.

This Estate comprises 9 acres of land in proximity to Barr's Court Railway Station, and situated in Barr's Court Road. The land is within easy reach of the majority of the industrial businesses of the city, and the town is to be congratulated on having such a site for building purposes, which is not at the disposal of a good many larger towns. I am indebted to Mr. Parker, the City Surveyor, for supplying me with the plan of the estate (see Appendix). On it are marked the roads which it is the intention of your Council to construct, and, in addition, the dotted lines show the probable directions in which future planning will be made.

On November 15th, a start was made, and at the time of writing the work was well in hand.

In the scheme, provision was made for the appropriation of the remainder of the land for building purposes and open spaces under the H.W.C. Act, 1890, for the purposes of Part III. of the same Act.

Your Council were of opinion when the scheme was presented that you would have no difficulty in leasing the land to others, under Sect. 5 of the H.W.C. Act, 1900. (At the time of writing a Society had been formed, "The Hereford Co-operative Housing, Ltd.," as the result of the efforts of the Mayor and others interested in the Housing Question in the City, and a public meeting was held in the Town Hall on Jan. 19th, at which a very interesting and instructive Lecture was given by Councillor Nettlefold, of Birmingham; large support was promised at the meeting and building operations are to be commenced shortly.)

On November 13th, 1908, a deputation, consisting of Alderman Rogers, Councillor Lewis, Mr. Bettington, Architect, the City Surveyor, and myself were shown round the Harborne Estate, Birmingham and saw some of the houses which had already been erected on the estate; in the afternoon we were shown some of the slum areas in Birmingham which have been transformed during the last few years.

We are indebted to Councillor Nettlefold, who has spent many years on the Housing Question, for many valuable suggestions.

FACTORY AND WORKSHOP ACT, 1901.

A large number of visits have been paid by your Inspector during the year. Details are given in the report which follows, which is required by the Home Office and is submitted in their official form. In addition there is a separate list of Workshops and Workplaces.

Ventilation.—This was on the whole satisfactory and only one notice was necessary.

Cleanliness.—In a few cases attention had to be drawn in reference to the limewashing of workshops. During the last quarter I visited the majority of the bakehouses with your Inspector and the remainder independently. Notices were necessary in certain cases in regard to limewashing the walls and ceilings and the cleansing of the floors. In some of the bakehouses the floors and walls are uneven and do not allow of proper cleaning.

Drainage Defects, &c.—Particulars are given in the table page 75 and below.

The 22 Notices served requiring contraventions of the Act to be remedied had reference to the following:—

Workshops, Workplaces and Bakehouses requiring cleansing ..	11
Want of Sanitary Conveniences for Males	1
Want of separate Sanitary Conveniences for sexes	2
Insanitary Waterclosets	2
Insanitary Urinals	2
Untrapped and Defective Drainage	2
Dilapidated Bakehouses	2
Accumulations of Manure	2
Additional Ventilation required	1

Attention was called to the following defects by H.M. Inspector of Factories:—

Workshops and Bakehouses requiring cleansing	2
Want of Sanitary Conveniences for Males	1
Want of Separate Sanitary Conveniences for sexes	2
Additional Ventilation required	1
Cubic space not specified	8

WORKSHOPS AND WORKPLACES.

The following is a list of the various Workshops and Workplaces on the Register at the end of 1908. The majority of Workshops are used for Tailoring, Millinery and Dressmaking.

Bakehouses	25
Milliners and Dressmakers	31
Tailoring	13
Blacksmiths	13
Plumbing and Gasfitting	10
Saddlery	9
Cabinet Making and Upholstering	7
Carpenters and Joiners	7
Cycle Repairing	7
Carriage Builders	5
Jewellers and Watch Repairs	5
Boot Repairers	4
Dentists	3
Sculptors	3
Laundries	3
Tinsmiths	2
Bottlers	2
Boat-building	2
Picture Framers	2
Art Needlework	1
Wool Knitting	1
Sewing Machine Repairers	1
Composition Figure Makers	1
Coopers	1
Cattle Medicine Manufacturer	1
Hide and Skin Depot	1
Hop Warehouse	1
Depository	1
Restaurant Kitchens	6
Motor Garages	4
Stable Yards	16
Total	188

OUTWORKERS.

I visited all the Outworkers during the last quarter of the year. The rooms used were satisfactory, in most cases being occupied by one person.

In a good many cases a separate room was used and in other instances one of the living rooms.

There was no overcrowding and on the whole the conditions under which the work was done were good.

In a few instances attention was drawn to the need for whitewashing or papering of the rooms.

REPORT FOR 1908.

Factories, Workshops, Laundries, Workplaces, and Homework.

1.—INSPECTION.

Including Inspections made by Sanitary Inspector.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
FACTORIES .. .. (Including Factory Laundries).	11	5	—
WORKSHOPS .. .. (Including Workshop Laundries).	67	14	—
WORKPLACES	17	3	—
TOTAL	95	22	—

2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Prosecutions
	Found.	Remedied	Referred to H.M. Inspector.	
*Nuisances under the Public Health Acts :—**				
Want of cleanliness	2	2	—	—
Want of ventilation	1	1	—	—
Overcrowding	—	—	—	—
Want of drainage of floors	—	—	—	—
Other nuisances	4	4	—	—
†Sanitary accommodation { insufficient	1	2	—	—
†Sanitary accommodation { unsuitable or defective	4	4	—	—
†Sanitary accommodation { not separate for sexes ..	1	—	—	—
Offences under the Factory and Workshop Act :				
Illegal occupation of underground bakehouse (S. 101)	—	—	—	—
Breach of special sanitary requirements for bakehouses (SS. 97 to 100)	11	11	—	—
Other offences	—	—	—	—
Total	24	24	—	—

* Including those specified in Sections 2, 3, 7 and 8 of the Factory and Workshop Act as remediable under the Public Health Acts.

† Section 22 of the Public Health Acts Amendment Act, 1890, was adopted in April, 1891. The standard of sufficiency and suitability of sanitary accommodation is that laid down in "The Sanitary Accommodation Order of **4th February, 1903. No. 89.**"

OUTWORKERS' LISTS, SECTION 107,

NATURE OF WORK.	Lists received from Employers						Addresses of Outworkers.	
	Twice in the year			Once in the year.				
		Outworkers.†			Outworkers.†			
	Lists.†	Con-tr'c'rs	Work-men.	Lists.	Con-tr'c'rs	Work-men.	Received from other Councils.	Forwarded to other Councils.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Wearing Apparel—								
(1) making, etc...	36	—	147	7	—	11	1	—
(2) cleaning and washing ..								
Lace, lace curtains and nets								
Artificial flowers ..								
Nets, other than wire nets								
Tents								
Sacks								
Furniture and upholstery	—	—	—	1	—	1	—	—
Fur pulling........								
Feather sorting....								
Umbrellas, etc.								
Carding, etc., of buttons, etc.								
Paper bags & boxes								
Basket making								
Brush making								
Racket and tennis balls............								
Stuffed toys								
File making								
Electro-plate								
Cables and chains ..								
Anchors & grapnels.								
Cart gear								
Locks, latches and keys								
Pea picking								
TOTAL	36	—	117	8	—	12	1	—

† The figures given in columns 2, 3 and **4** are the *total* number of lists (received from employers who sent them both in February and August as required by the Act) and of the entries of names of outworkers in those lists.

4.—REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year. (1)	Number (2)
Workshops	127
,, Domestic	5
,, Bakehouses	25
,, **Laundries**	3
Workplaces	28
Total number of workshops on Register................	188

WORK.

Notices served on Occupiers as to keeping or sending lists. (10)	Prosecutions.		Inspections of Out-workers' premises (13)	Outwork in Unwholesome Premises. Sec. 108.			Outwork in Infected Premises. Secs. 109, 110		
	Failing to keep or permit inspection of lists. (11)	Failing to send lists. (12)		Instances. (14)	Notices served (15)	Prosecutions (16)	Instances (17)	Orders made (S. 110.) (18)	Prosecutions (S. 109, 110.) (19)
17	—	—	87	—	—	—	—	—	—
—	—	—	1	—	—	—	—	—	—
17	—	—	88	—	—	—	—	—	—

5.—OTHER MATTERS.

Class. (1)		Number (2)
Matters notified to H.M. Inspector of Factories:— Failure to affix Abstract of the Factory and Workshop Act (s. 133)		—
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5)	Notified by H.M. Inspector...	6
	Reports (of action taken) sent to H.M. Inspector.......	5
Other		8
Underground Bakehouses (s. 101):— Certificates granted during the year		—
In use at the end of the year		2

SLAUGHTER-HOUSES.

The City is fortunate in possessing a public slaughter-house with ample accommodation. The ventilation is good, the floors are well laid in concrete, and being hard and impervious are easily cleaned. The walls present a smooth surface and are readily washed down.

The accommodation is as follows :—

	ft.	in.		ft.	in.	Area in feet.
10 Slaughter-houses	14	9	by	19	9	2913
2 ,,	29	6	by	19	9	1165
*1 ,,	19	0	by	18	0	342
Total						4420

At the time of writing the question of transferring the gut-scraping business, which at present occupies one of the slaughter-houses, to a new building in another part of the grounds was under discussion by your Watch and Markets Committee. This would leave additional accommodation (included in the above) which is necessary on account of the closing of several of the private slaughter-houses in 1907. The question of providing cooling rooms has not yet been decided.

Lairage Accommodation.—The lairage accommodation in connection with the public slaughter-house is as follows :—

Description.	Size. ft. in.		ft. in.	Area. sq. ft.	Accommodation.
17 Cattle Lairages	11 0	by	13 0	2431	72 cattle in a day.
1 ,,	11 0	by	14 3	157	
†4 Sheep and Lamb Lairages	11 0	by	14 0	616	140 sheep and lambs.
4 Pig Lairages	11 0	by	14 0	616	50 pigs
6 Pigstyes	15 0	by	8 0	720	36 pigs
Total				4540	

Private Slaughter-houses.—There are only two private slaughter-houses in the City as follows :—

Rear of Hunt's Cottages, Eign Street.
Newmarket Street.

It was only necessary on three occasions during 1908 to draw attention to contraventions of the Byelaws. In the case of one of the slaughter-houses, new tenants occupied the premises, and

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* At present used as a General Store.

† One of these is use as a Bacon Lairage during the winter months. Accommodation for 14 pigs.

in accordance with Sect. 30, Public Health Acts Amendment Act, 1890, notice was received of this. During the year 93 visits were paid to slaughter-houses.

The public slaughter-house was used by 19 butchers, 14 occasional butchers, and 12 other persons for slaughtering pigs.

The following tables show the number of animals slaughtered during last year and in the 8 preceding years :—

1908.	Beeves	Calves	Sheep	Lambs	Pigs (Pork)	Pigs (Bacon)	Total
January ..	102	10	365	..	149	86	712
February ..	113	11	435	..	154	74	787
March ..	126	40	471	3	164	69	873
April	119	58	462	58	145	28	870
May	149	79	593	196	113	7	1137
June	110	61	415	303	34	..	923
July	100	61	389	311	25	..	886
August ..	137	54	485	442	68	1	1187
September	116	19	332	272	167	1	907
October ..	161	19	687	48	236	12	1163
November	126	9	527	..	167	85	914
December ..	133	7	447	..	157	77	821
Total for 1908	1492	428	5608	1633	1579	440	11180

YEARS 1900-1907.

YEAR	Beeves	Calves	Sheep	Lambs	Pigs (Pork)	Pigs (Bacon)	Total
1900.. ..	959	429	4441	1131	1405	149	8514
1901.. ..	1122	432	4401	1139	1100	113	8307
1902.. ..	1183	424	4760	1385	1198	164	9114
1903.. ..	1142	338	5002	1391	1338	508	9719
1904.. ..	1146	358	5222	1572	1366	380	10044
1905.. ..	1289	410	4780	1309	1225	391	9404
1906.. ..	1289	462	4917	1302	1150	377	9497
1907.. ..	1283	444	4711	1343	1300	506	9587
Total for 8 yrs. 1900 to 1907	9413	3297	38234	10572	10082	2588	74186
Average for do.	1176	412	4779	1321	1260	323	9273

Diseased Carcases, etc.—Attention was drawn by the Manager to the following diseased conditions in animals during the year :—

(1) A bullock showed signs of Enteritis and General Wasting.

(2) Examination of a sheep which had died in the City pound showed signs of Pneumonia; two other sheep (3) and (4) also died in the pound, the former a few hours after being placed there from Pneumonia, the latter from Enteritis and Peritonitis.

(5) Another sheep showed signs of Peritonitis.

(6) Evidence of slight Inflammation of the Lungs was found in a calf.

(7) A lamb killed in the slaughter-house showed localised Inflammation of the Abdomen.

(8) A sheep killed and dressed showed extensive bruising about the hind quarters. The bruised portion was cut away and destroyed; weight, 10lbs.

(9) A calf brought in already killed showed signs of Enteritis.

The carcases were burnt at the destructor; all were voluntarily surrendered.

The small amount of disease amongst the animals slaughtered and the absence of Tuberculosis is very satisfactory.

Other Unsound Food.—Three boxes each of kippers, haddock and mackerel and a cod-fish weighing 15 pounds, all belonging to the same person, were voluntarily surrendered and destroyed.

SALE OF FOOD AND DRUGS ACTS, 1875 to 1907.

During the year 62 samples were taken by Mr. Protheroe as Inspector under the Acts, particulars are given in the table.
In estimating the number of samples to be taken during the year, it is usual to allow 3 for every 1,000 of the population, and last year it was arranged that this proportion of samples should be taken. The majority of the samples taken were of butter and milk, as suggested by the Board of Agriculture.

New Milk.—Of the 30 samples of new milk, 8 were certified as "genuine and of good quality," three as "genuine and of normal quality," 16 as "genuine," 1 as "of somewhat low quality," 1 as "only just up to the standard of the Board of Agriculture," and 2 as "adulterated," containing five and a half, and seventeen and a half per cent. respectively of added water. The vendor in the latter case, who was a cow-keeper outside the City, was fined £1 and costs, £2 4s. The case against the vendor of the former sample was withdrawn, the defendant in the second case being the wholesale man. Two samples were purchased "informally." Eighteen samples were purchased from shops and twelve from purveyors in the street.

WHISKEY.—The sample of whiskey was certified to be 43.86 degrees under proof, containing 25 per cent. more water than 25 degrees under proof whiskey. The circumstances of the case were such that after consultation with the Town Clerk, no proceedings were taken and the vendor was cautioned.

The samples of cheese, cocoa, honey, crab and salmon paste, and crab paste were purchased "informally."

The following table shows the number and nature of articles purchased for analysis during the year 1908, and the result of the analysis :—

ARTICLES.	Number of Samples purchased.	Number genuine.	Number Adulterated.	Number low in quality.	Vendors Cautioned.	Proceedings taken.		FINES.			COSTS.		
						Convicted.	Withdrawn.	£	s.	d.	£	s.	d.
New Milk	30	28	2	1	1	1	1	1	0	0	2	4	0
Butter	13	13	..	..	..	..	..	.	.	.	.	.	.
Margarine....	1	1	..	..	..	..	..	.	.	.	.	.	.
Lard	1	1	..	..	..	..	..	.	.	.	.	.	.
Cheese	1	1	..	..	..	..	..	.	.	.	.	.	.
Flour........	3	3	..	..	..	..	..	.	.	.	.	.	.
Coffee	2	2	..	..	..	..	..	.	.	.	.	.	.
Cocoa	1	1	..	..	..	..	..	.	.	.	.	.	.
Mustard	1	1	..	..	..	..	..	.	.	.	.	.	.
Pepper	1	1	..	..	..	..	..	.	.	.	.	.	.
Malt Vinegar	1	1	..	..	..	..	..	.	.	.	.	.	.
Honey	1	1	..	..	..	..	..	.	.	.	.	.	.
Demerara Sugar	1	1	..	..	..	..	..	.	.	.	.	.	.
Crab and Salmon Paste	1	1	..	..	..	..	..	.	.	.	.	.	.
Crab Paste ..	1	1	..	..	..	..	..	.	.	.	.	.	.
Cider	2	2	..	..	..	..	..	.	.	.	.	.	.
Whiskey	1	..	1	..	1	..	..	.	.	.	.	.	.
Total....	62	59	3	1	2	1	1	£1	0	0	£2	4	0

OFFENSIVE TRADES.

The following are a list of offensive trades in the town :—

Trade.	*Owners.*	*Address.*
Gut-scraper	Frank Mertz	Public Slaughterhouse
Hide and Skin receiving Depot	Harrison & Bowen	Newmarket Street.
Ditto	G. R. Herron and Son	Commercial Road.
Tripe Boiler	J. J. Bennett	70. Commercial Road
,,	W. Lewis	25, Eign Street
,,	Elizabeth Lloyd	18, Little Berrington Street
,,	George Bagnall	2, Bridge Street
,,	J. B. Rudge	54, St. Martin Street
,,	A. R. Hartland	8, Eign Street
,,	Rosser Bros.	23, Commercial Street
,,	J. Richardson	58, Eign Street

These premises have been kept in a sanitary condition during the year. Some of the buildings in which tripe is made could be improved and some might be replaced with advantage. It is important to have smooth surfaces that can be washed down readily.

FRIED-FISH SHOPS.

There are 8 fried-fish shops in the town, but in two of the shops fried-fish is only sold occasionally, the main business being in greengrocery. On the whole the trade is conducted in a satisfactory manner. Freedom from objectionable smells depends largely on the cleanliness of the apparatus for frying and proper means for taking away the fumes. The quality of oil used for frying is also important. Some alterations will be necessary in some of the premises.

MARINE STORES.

Only three places are used for this purpose; visits were paid during the year. The business was conducted in a satisfactory manner.

ICE CREAM PLACES.

There is only one regular vendor in the town and at the time of writing he had decided to discontinue the business. It is important that the premises on which ice-cream is manufactured should be kept in a good sanitary condition.

SMOKE NUISANCE.

The absence of smoke is a noticeable feature of the town, and the buildings present a very clean appearance. Observations were made in a few instances where the smoke appeared to be excessive; but excess of black smoke did not last for any lengthy period and no action was necessary.

WATER SUPPLY.

The water supply is from the river Wye. The Wye is generally a well oxygenated river, due to a series of rapid shallows, the nearest of these above the inlet to the reservoir being one mile distant. At Hay the lowest summer level of the river is computed to be 299 feet 3½ inches above Ordnance datum; at the inlet to the Reservoir, the lowest summer level is 152 feet 9 inches, a fall of 147 feet 6½ inches in 29 miles, equal to an average fall of 5 feet per mile. The average width of the river is 70 yards, and it is liable, especially on the breaking up of ice and melting of snow upon the hills of Breconshire and Radnorshire, to floods, rising on some occasions to 18 feet. On Jan. 6th, 1903, the flood rose to 13 feet 10 inches above summer level. There is a record of a flood 18 feet 6 inches in height.

In periods of floods the water contains a large amount of matter in suspension, which, however, as a rule subsides. During floods the pumping operations are suspended. With the exception of some outlying sparsely populated parts, the City is supplied with water from the Reservoir on Broomy Hill. The water, after being pumped up from the river, first passes through three Mather and Platt's Gravity Filters, in order to get rid of the suspended matter. These filters are situated about 100 feet above the level of the river. Each filter consists of a large circular iron tank open at the top and resting on a cast iron chamber in which the filtered water collects before its discharge through the outlet valve. The filters are 14 feet in height and 12 feet in diameter. The water passes through layers of graded quartz, passing from the coarsest at the top to the finest at the bottom. The water passes in a clear stream to the Storage Reservoir, which has a capacity of 4½ million gallons when filled to a depth of 17 feet. The water then passes through two filter beds with an area of 28,000 square feet. The following is the composition of these filters:—

	feet.	*in.*
Sand	2	3
Pea Gravel	1	0
Coarse Gravel	1	3

The gravity filters remove coarser particles of suspended matter, and act mechanically, but the sand filters depend for their efficiency on the action of bacteria. The efficiency of sand filters increases as time goes on; the bacteria gradually produce a gelatinous film on the surface of the sand and this arrests bacteria and the finer particles of suspended matter.

Too frequent cleaning of the sand filters would destroy the bacterial action of the filters. If it were not for the use of the gravity filters, the sand filters would become choked with suspended matter, and this would necessitate frequent cleaning of the filters. At present it is arranged that the surface of the sand filters shall be scraped every three months; this must be the limit to the frequency of cleaning of these filters. The maximum amount of water passing through in 10 hours is 750,000 gallons. From the filter beds the water drains into the clear water reservoir, whence it is distributed by the Low Pressure system into the mains, and also pumped into a tank 13 feet deep on the Water Tower (100 feet in height) to supply the elevated parts of the City from the High Pressure system.

The water is raised from the pumping station, near which is a bench-mark 175.8 feet, to a height equivalent to about 120 feet for the Low Pressure supply, and 220 feet for the High Pressure supply. Above the plinths of the Water Tower is a bench-mark 242.5. feet. This tower was built in 1882.

The water is of good quality. The following are the results of a recent analysis which I made of the town water obtained at the Town Hall from the service tap :—

1. Colour in 6-inch column.—none.
2. Turbidity.—nil.
3. Reaction.—nil.
4. Residue left on evaporation.—very slight, greyish-white in colour; no signs of charring when ignited and no smell.
5. Free ammonia.—no evident trace.
6. Chlorine.—less than 2 grains of chlorine per gallon.
7. Nitrates.—nil.
8. Nitrites.—nil.
9. Hardness.—5° mostly permanent.
10. Zinc, iron, copper and lead.—no trace.
11. Oxygen absorbed (at boiling point for 15 mins.).—.05 grains per gallon.

I am indebted to Mr. Parker, the City Surveyor, for the following particulars in regard to the amount of water consumed during the year and also for various particulars in regard to the filters, &c.

Water consumed during the year ..	416,026,763	gallons.
Used for trade purposes	63,338,000	,

(As ascertained by meter).

The amount per head of the population was 51 gallons, of this amount 7.7 gallons were used for trade purposes. This leaves 43.3 gallons per head for municipal purposes and domestic use. This is a very liberal supply, as 25 to 30 gallons per head in Great Britain is considered an average supply for all purposes. The water is used freely for watering the streets, etc.

Districts Supplied by Well Water.—Whilst the bulk of the inhabitants are supplied by the town water there still remain a certain number of houses which obtain their water supply from wells. There are still 23 houses in Westfields supplied by 14 wells, and as in 18 instances the houses are also connected with cesspools, it will be seen that every precaution is necessary to prevent pollution of the wells of which the majority are shallow. There probably still remain about 30 wells in Hunderton, Huntington, Tupsley and Holmer. Samples of the water from the wells will be taken from time to time for chemical analysis.

SCAVENGING.

From a health point of view it is important that all refuse should be removed at frequent intervals. The system which your Council has adopted of arranging for weekly and bi-weekly removals of refuse under the supervision of your City Surveyor is an excellent one. The absence of ash-pits prevents the accumulation of refuse. In place of the receptacles which are used by householders, in the majority of cases, and which cannot be properly cleansed, I would suggest the substitution of a galvanized iron bin ; these bins can be purchased for a few shillings. A good form of bin is of a D shape in order to allow the flat surface to be placed against a wall.

Your Council has the authority to determine what form of receptacle shall be used, and I would commend to your serious consideration the question of using this power.

About 40 per cent. of the refuse collected is taken to the destructor in carts which are covered over with a tarpaulin sheet. I am indebted to the City Surveyor for particulars in regard to the destructor and the amount of refuse burnt.

	tons.
Amount of refuse burnt	3120
Amount of refuse tipped	4888
	8008

In addition to house refuse, a large amount of animal and vegetable waste from the shops of butchers, greengrocers, and fishmongers and the slaughter-houses, is conveyed to the destructor to be burnt.

THE DESTRUCTOR.—The destructor is one of Meldrum's and was erected in December, 1897, and has been in continual use since. It is placed at the sewage outfall works on a piece of land inclosed in a bend of the river Wye and is conveniently out of sight and yet within a mile of the centre of the city. About 9 tons of refuse are used daily to provide sufficient fuel to allow for the necessary power for raising from the underground receiving tank one and a quarter million gallons of sewage per day of 10 hours, in addition to performing the necessary operations in connection with lime-mixing, etc. The power furnished by the destructor is also used to provide the electrical energy for lighting the engine-house and sewage mixing buildings. The clinker from the furnaces is used for the formation of the filter beds which are needed for the bacterial treatment of the sewage, and the fine dust is used for the production of mortar.

The products of combustion in connection with burnt refuse after being subjected to a temperature of from 2,000 to 3,000 degrees Fahrenheit, pass in the form of light vapour through a chimney 45 feet in height.

SEWAGE AND SEWAGE DISPOSAL.

The sewage of the City is on the water carriage system, with the exception of a few outlying districts such as Hunderton, Putson, (both on the south of the river Wye), part of the district of Westfields in the north-west, and parts of Tupsley parish. The main sewers were constructed in 1854.

Up to the year 1889, the crude sewage of the City flowed into the river Wye at nine points between the railway bridge at Hunderton and the railway bridge at Eign.

Later an order was issued against the Authorities restraining them from allowing the continuance of the pollution, and it became necessary to remodel the whole system.

The system of intermittent downward filtration and irrigation at the Sewage Outfall Works near the Eign railway bridge was opened in May, 1890.

The new system included a 12-inch cast-iron syphon under the river to convey the sewage of the town south of the river Wye.

By the new system sewage alone is carried, but half of the town is still drained by the old sewers, which convey both rainfall and storm water, amounting to the average daily discharge of one and a quarter million gallons. At times of flood the amount is increased to three million gallons. From 1889 up to the end of 1900, the sewage was treated with lime and alumino-ferric and collected in precipitation tanks, the upper layer was discharged alternately into one or other of six beds of stone ballast before passing to the river.

At the end of 1900 the Town Council approved the adoption of auxiliary bacterial filtration, which dispensed with the additional cost of lime, etc. The first filter bed was constructed in 1903, the second in 1904, a third in 1905 and a fourth is at present in course of construction. The beds are formed of the clinker from the furnaces at the destructor.

The sewage first passes into a septic tank holding 750,000 gallons (receiving tank) and then into three tanks each of 150,000 gallons capacity. The whole of the large tank is covered and one half of one of the smaller tanks. The sewage is allowed to remain in these tanks for from 14 to 24 hours and then flows on to the filter beds. The area of the filter beds is as follows:—one 1,700 square feet and two 2,000 square feet. The one in process of construction is to be 2,160 square feet. The three filter beds relieve the land irrigation system of 600,000 gallons of sewage daily. The effluent from the filter beds is submitted to land drainage before its discharge into the river Wye. The effluent is a good one, being clear and free from smell.

In regard to septic tanks which are uncovered, it is found that after a time a layer of sludge forms on the surface, and this acts in the capacity of a cover and the anaërobic bacilli develop freely. It is at this stage that the organic matter is broken up by the bacteria; gases are freely formed, as seen by the bubbles on the surface of the liquid. During the passage of the sewage through the filter beds after leaving the tanks, the aërobic bacilli come into play and the products in solution take up oxygen and are converted into nitrites, nitrates, etc. When this is completed, the effluent is clear and free from odour. This latter process is further completed as the effluent flows through the land on its way to the river.

Other Systems of Sewage Disposal.—In the Westfields district 55 houses are connected with the sewerage system and 18 to cesspools. There still remain 53 earth-closets and 9 privies in this district. At the end of the year a septic tank and filter beds were in process of construction to deal with the sewage of the district. At Hunderton, privies, earth-closets and cesspools are still in use, and there are outlying parts such as Holmer, Tupsley and beyond Aylestone Hill which are not connected with the sewerage system, owing to the difficulty of levels.

WORK DONE THROUGH THE SANITARY INSPECTOR.

This portion of the work of the Health Department can be best shown in tabular form.

The Sanitary Inspector reports that the following matters have received his attention during the year:—

DRAINAGE—	1906.	1907.	1908.
Obstructed drains opened and cleansed	66	64	56
Defective drainage repaired or relaid	145	74	92
Houses with insufficient drainage, extra provided	3	7	7
Houses connected to public sewer	4	6	7
Drains disconnected from River Wye or brooks	2	0	0
Glazed stoneware gullies fixed	198	98	141
Patent "ball" traps fixed in areas and cellars	0	0	1
Grease interceptors fixed	2	1	0
Drains removed from inside or underneath houses	16	12	6
Drains removed from inside or underneath wash-houses	5	1	4
Sewer interceptors fixed	15	17	27
Disconnecting and inspection chambers constructed	51	35	51
Inspection chambers repaired	15	4	3
Ventilating shafts fixed or repaired	33	22	29
New cesspools constructed	2	0	0
Cesspools cleaned out	3	3	6
,, provided with air-tight covers	3	0	0
,, abolished	2	2	2
Filtering beds constructed	0	1	1

WATER CLOSETS, PRIVIES, AND URINALS—			
Obstructed w.c's opened and cleansed	29	19	24
Dilapidated w.c's repaired	57	46	29
,, rebuilt	3	3	6
New "washdown" basins fixed	42	23	37
New seats fixed to w.c's	30	43	28
Floors of w.c's relaid	26	26	20
Roofs of w.c's repaired	22	10	19
Doors of w.c's repaired or renewed	0	0	10
Insanitary "pan" and other closets removed and pedestal basins fixed	32	23	27
Soil-pipes removed from inside houses	3	1	2
,, repaired or renewed	12	12	10
Anti-syphon pipes fixed to w.c's	0	0	0
Ventilation provided to w.c. compartments	0	0	4
Insufficient accommodation, extra w.c's or earth-closets erected	4	0	1
W.C.'s and earth-closets converted into automatic flushing trough water-closets	0	0	0
Water supply provided to w.c's	15	6	10
Defective flushing apparatus repaired or new provided	38	40	48
Automatic flushing cisterns fixed	1	0	0
Filthy water and earth-closets limewashed	36	22	34
Privies converted into water-closets	2	2	0
,, ,, earthclosets	6	0	1
,, cleansed out and abolished	4	3	0
Urinals constructed	4	0	0
,, repaired and limewashed	2	0	4
,, abolished	0	0	2

DWELLING-HOUSES, ETC.—	1906	1907.	1908.
Filthy and dilapidated houses cleansed and repaired	33	40	37
Houses partly or entirely demolished	0	0	19
Houses closed as unfit for habitation	6	21	8
Pantries or food cupboards provided	0	0	3
Houses stripped and cleansed after infectious disease	7	3	4
Schools disinfected or cleansed	1	3	1
House roofs repaired	22	29	24
Wash-house and kitchen roofs repaired	18	7	15
Chimneys raised or repaired	10	16	7
Floors relaid or repaired	6	26	19
Dangerous stairs and defective windows repaired	5	19	23
Dangerous cellar windows repaired	1	0	5
Cases of overcrowding abated	0	1	1
Dilapidated wash-houses repaired	5	2	1
,, ,, rebuilt	4	1	3
Filthy wash-houses limewashed	13	3	13
,, passages limewashed	3	3	2
,, cellars limewashed	2	12	14
Stagnant water removed from cellars	1	3	6
Yards and passages paved or paving relaid	33	27	38
Water supply provided to houses	0	44	19
Defective pumps repaired	1	3	0
Dangerous disused wells filled up	2	2	0
Polluted wells closed	1	4	0
Wells cleaned out or repaired	2	2	2
SINKS, WASTE-PIPES, AND SPOUTING—			
Dilapidated sinks repaired	10	10	14
New glazed stoneware sinks fixed	20	10	23
Waste-pipes provided to sinks	30	21	33
Sink-pipes disconnected from drains	8	1	4
Bath and lavatory waste-pipes disconnected from drains	9	5	9
Rain-water pipes disconnected from drains	39	20	51
Rain-water pipes disconnected from soil pipes	0	0	2
Spouting repaired (houses)	91	49	59
,, provided to houses where none existed	10	4	6
KEEPING OF ANIMALS AND MANURE—			
Stables paved and drained	1	2	0
Floors of slaughter-houses and lairage pens relaid	2	0	0
Floors of cowsheds relaid	3	3	1
Light and ventilation provided to cowsheds	2	0	0
Water supply laid on to cowsheds	0	0	1
Nuisances from animals improperly kept, abated	12	10	12
Keeping of swine discontinued	3	2	2
Boiling of offal discontinued	2	0	0
Pig-styes repaired or pulled down	0	0	0
Accumulations of manure and refuse removed	34	34	45
Manure pits repaired	3	3	0
MISCELLANEOUS—			
Dairies and cowsheds limewashed on notice	1	2	1
Bakehouses ,, ,,	1	5	8
Slaughter-houses ,, ,,	3	1	4
Tripe-boiling places ,, ,,	0	0	0
Workshops ,, ,,	3	7	4
Common lodging-houses ,, ,,	14	13	9
Overcrowding of workshops abated	0	0	0
Workshops ventilated	0	0	1

	1906.	1907.	1908.
Drains inside dairies removed	0	0	0
,, bakehouses removed	0	0	0
,, slaughter-houses removed	0	0	0
,, tripe boiling places removed	0	0	0
Hoods provided to tripe-boiling furnaces or stoves	0	0	0
Bakehouse ceilings plastered or boarded	0	0	1
Bakehouse floors scraped and cleansed	0	0	7
Bakehouse floors concreted	0	0	1
Ashpits abolished	1	1	0

NOTICES SERVED.

Statute or Byelaw.	No. of Notices served.	No. not complied with at end of 1908.
Public Health Act, 1875 (Preliminary)	296	65
ditto (Statutory)	4	2
Public Health Acts Amendment Act, 1890 (Statutory)	2	2
Infectious Disease (Prevention) Act, 1890	3	—
Housing of the Working Classes Acts, 1890 to 1903	7	—
Factory and Workshop Act, 1901	22	1
Regulations under Dairies, Cowsheds and Milkshops Order 1885	3	2
Regulations in respect to Private Slaughter-houses	3	—
Regulations in respect to Nuisances	11	—
Total	351	72

In addition to the above, 157 letters were written by the Inspector respecting the notices and 65 reports were made to the City Surveyor respecting dangerous buildings, waste of water, or other matters connected with his department.

It will be seen that a large amount of work in connection with drainage defects, nuisances, etc., has been carried out by the Sanitary Inspector; he has also paid a large number of visits to workshops, bakehouses, cowsheds, slaughter-houses and other premises under the supervision of the Sanitary Authority.

As the whole of the time has been occupied with this work, there has been no time left for systematic house-to-house inspection. It is important that such inspections should be carried out in a district, whereby defects may be found and remedied.

LEGAL PROCEEDINGS.

The accompanying table gives an account of the proceedings taken by the Sanitary Inspector in the Court of Summary Jurisdiction during the year.

No. of Summonses.	*Offence.*	*Statute under which proceedings were instituted.*	*Fines.*			*Costs.*			*Remarks.*
			£	s.	d.	£	s.	d.	
1	Failing to comply with Notice to abate nuisances.	Public Health Act, 1875.		—			—		Closing Order granted under Section 97, P.H. Act, 1875.
1	Failing to comply with Justices' Closing Order in respect to above.	do.	14	0	0	0	10	6	After an adjournment for one month to enable defendant to carry out necessary works a fine of 20s. per day for 14 days, and costs was imposed. The penalty not having been paid a distress warrant was issued. This was not levied and a Commitment Warrant was issued and defendant sent to prison for 2 months.
1	Selling new milk containing 5½ per cent of added water.	Sale of Food and Drugs Acts, 1875 to 1899.		—			—		Withdrawn. Wholesalesman summoned and convicted. (See below.)
1	Selling new milk containing 17½ per cent. of added water.	do.	1	0	0	2	4	0	—
1	House unfit for human habitation and in such a state that it could not be reasonably rendered fit.	Housing of the Working Classes Act, 1903, Sect. 8.		—			—		Closing Order granted under Section 32, H.W.C. Act, 1890, and afterwards rescinded after opposition.
3	Four houses unfit for human habitation and in such a state that they could not be reasonably rendered fit.	do.		—			—		Closing Orders granted by consent under H.W.C. Act, 1903, Sect. 8.

CITY OF HEREFORD.

FIRST ANNUAL REPORT to the Education Committee.

To the Chairman and Members of the Education Committee,
City of Hereford.

LADIES AND GENTLEMEN,

I have the honour to submit for your consideration a Report for the year 1908 on the Sanitary condition of the Elementary Schools of the town and the Medical Inspection of school children.

GENERAL SANITATION.

During the last quarter of the year, I visited the majority of the elementary schools in the town. The general sanitary condition of the schools is on the whole good, but there are defects here and there. Some general remarks will indicate in what way improvements could be made as regards heating, ventilation, lighting, &c., in some of the schools.

CUBIC SPACE.—At present your Committee have under consideration the question of distributing the children so that 10 square feet may be allowed for each child as required by the Board of Education. This amount of floor space would allow each child 130 cubic feet, as any height above 13 feet is not reckoned in measuring cubic space, and this is a reasonable amount but not too much.

VENTILATION.—Reliance is placed in the schools in the town on natural ventilation, chiefly by means of windows, supplemented in some cases by Tobin's tubes, Sherringham valves, and other forms of ventilator. For schools, natural ventilation works very well, and where there are windows on opposite sides of a class-room no other form of ventilation is necessary. The window space should be not less than one-sixth of the floor space, and may with advantage be one-fifth. The sills of the windows should not be more than 4 feet from the floor and the upper part of the windows should reach to within a few inches of the ceiling. The top and bottom panes should be made to open inwards on the hopper principle, and should be flanged laterally, so that when the windows are open, there is no passage of air at the sides, the air passing upward in an even current. In the Winter-time it is sufficient to have the upper panes opened; during the Summer upper and lower panes could be opened. The ventilation can be regulated by the teachers, draughts can be prevented by opening the windows on the leeward side of the room. During play-time and after school hours the windows should be widely opened. Where Tobin's tubes and other forms of ventilator are used they should be constructed so that they can be cleaned out; some of the ventilators I saw could not be properly cleaned. Any grating at the inlet opening should not be fixed but be made to take in and out.

Lighting.—It is most important that class-rooms should be well lighted; a badly-lighted room has an injurious effect on the eye-sight. The light should preferably come from the left, the next best quarter is the right. Direct light from the front and through sky-lights, except in the case of a central hall, is objectionable. It is important that the windows should be of plain glass, and the absence of small, diamond-shaped panes is essential. The walls should be tinted a pale green or grey, colours best suited to the eyes.

Heating.—Small class-rooms can be heated by fires or stoves, preferably by fires, as they also have the advantage of acting as ventilators. Stoves should be provided with suitable chimneys, and fresh air should be admitted from the outside through flues. Large class-rooms are best heated by radiators and steam pipes. Where a fire is used for heating purposes in a large room, the children nearest the fire are over-heated, and those furthest away suffer from cold. A thermometer should be hung in each class-room and the temperature taken daily.

A temperature of 60° Fahrenheit should be maintained.

Cloak-rooms.—Adequate cloak-rooms should be provided, they should be well lighted and ventilated. They should not be mere passages. The hooks should be one foot apart, and there should be at least 4 feet gangway between rows of hooks; adjacent rows of hooks should be separated a few inches.

Playgrounds.—The surface should be hard and smooth, *e.g.*, of asphalte, and there should be a shelter at one end.

Water Supply.—It is essential that schools should have a good water supply. In Hereford the schools are all supplied from the town service.

Disposal of Refuse.—In the City there are arrangements for frequent collections of refuse. The refuse should be stored in covered bins and emptied at least once a week.

Cleaning.—Before sweeping floors they should be sprinkled over with damp saw-dust, and the windows should be opened. The floors should be washed weekly with water to which some disinfectant may with advantage be added; desks and other wood work should be cleansed from time to time. All Tobin's tubes and other forms of ventilator should be cleaned out periodically, and it is important that windows should be regularly cleaned, as dusty windows obstruct the light.

INFECTIOUS DISEASE IN SCHOOLS.

There was very little infectious disease in the schools during the year: I am indebted to the Head Teachers of the various schools for information on this point. A small outbreak of scarlet fever occurred among the scholars of St. Peter's Infants, which necessitated the closing of the school on November 19th. Particulars are given in the following table:—

No.	Case.	Sex.	Age.	Date of notification.	Name of Street.
(1)	M. R.	F.	6	Oct. 20	Bath Street
(2)	E. R.	M.	8	,, 31	Gaol Street
(3)	J. B.	F.	5	Nov. 9	St. Owen Street
(4)	H. E.	M.	2½	,, 7	Bryngwyn Terrace
(5)	G. T.	F.	4	,, 10	East Street
(6)	W. J.	M.	5	,, 10	Aylstone Hill
(7)	A. T.	F.	8	,, 11	East Street
(8)	B. S.	F.	5½	,, 11	Ferrers Street
(9)	J. L.	M.	4	,, 19	Bath Street
(10)	D. H.	F.	3½	,, 19	St. Owen Street

(1), (2), (3), (5), (6), (7), (8), and (9) attended the school and also a brother of (4). I visited St. Peter's Infants' School on Nov. 9th and examined all the children, but was unable to find any cases of the disease. I examined particularly all children who had recently suffered from sore throat. On account of information received from the Head Mistress, I visited two houses on Nov. 10th, and examined two children with rashes; one was suffering from german measles, but the other (G. F.) had scarlet fever. She was promptly removed to the Hospital, but too late to prevent her sister A. F. developing the disease on the following day: the latter was also removed to the Hospital.

On November 11th and 12th I visited 13 absentees from school and found another case of scarlet fever. No more cases occurred until Nov. 19th, when another child, J. L., developed the disease. On this date I visited 6 more absentees, among them J. L. The school was closed on Nov. 19th. The disease was of a mild type and several cases at the commencement were probably overlooked by the parents, and so the disease was conveyed to other children in the school. No further cases occurred after the closing of the school. All the cases were removed to Hospital, and this, as well as the early removal of cases, prevented the spread of the disease.

In order to check infectious disease in a school, it is important to have early knowledge of cases occurring. When once the disease has obtained a footing, nothing remains except to close the school. I would suggest to your Committee that cases of infectious disease should be notified weekly to me by the Head Teachers of the various schools. This information would be of the greatest service. Such notification is now carried out in a large number of towns; by such means the disease can be checked, and in addition by means of information given to parents in regard to nursing, &c., a good many deaths might be prevented.

In an earlier part of this Report I drew attention to the fact that more deaths occur from measles and whooping cough than from scarlet fever, diphtheria and typhoid fever put together.

It would be useful if cards containing particulars regarding the various infectious diseases, such as scarlet fever, measles, whooping cough, chicken-pox, etc., were distributed among the various schools; such cards could be hung up in each class-room.

NUMBER OF ELEMENTARY SCHOOL CHILDREN.

I am indebted to Mr. D. Allen for particulars in regard to the average number of children on the Register during the first three quarters of the year 1908, and for the years 1902 to 1907.

Year ending Jan. 31st.	No. of children.	Increase.	Decrease.
1902	3470		
1903	3559.2	89.2	..
1904	3566.3	7.1	..
1905	3566.6	.3	..
1906	3612.8	46.2	..
1907	3549.1	..	63.7
†1908	3484.6	..	64.5

† Three quarters ending Oct. 31st.

After the year 1904 particulars were given in regard to the number of children on the register under 5 years and from 5 to 14 years:—

Year.	under 5 years.	Increase.	Decrease.
1905	364.3	..	..
1906	325.8	38.5	..
1907	283.6	..	42.2
†1908	289.4	5.8	..

Year.	5-14 years.	Increase.	Decrease.
1905	3202.3	..	..
1906	3287.0	84.7	..
1907	3265.5	..	21.5
†1908	3195.2	..	70.3

† For the three quarters ending Oct. 31st. The average for the whole year ending Jan. 31st was 3471.8, including all ages.

During the years 1907 and 1908 (ending Oct. 31st) there has been the largest decrease, viz.:—128, made up of 36 children under 5 years and 92 from 5 to 14 years. These figures corroborate the particulars which were recently obtained in regard to the number of children in the City.

The number of children on the census books under 14 years on Oct. 30th, 1908, was as follows:—

Year.	Under 3 years.	3–5.	5–14.	Total.
1903	1129	843	3853	5825
*1908	1079	792	3754	5625
Decrease	50	51	99	200

* Corrected up to Dec. 31st.

Information was obtained that there were 316 children attending private schools, compared with 379 in the year 1903. Along with the decrease of about 77 in the Elementary Schools since 1903, there would be a total decrease of 140 school children.

The number of children on the Register for the year ending Jan. 31st, 1909, was 3471.8, and the average attendance 3186.7. Particulars in regard to each school are given in the accompanying table.

Reference has already been made to the decrease in the number of children in connection with population and birth-rate.

RETURN SHEWING AVERAGE NO. ON REGISTER AND AVERAGE ATTENDANCE DURING THE YEAR ENDING 31ST JAN., 1909.

Name of School.	Average No. on Register.	Average Attendance.
All Saints (Infants)..	199	168.7
Blue Coat (Boys)	182	161
Do. (Girls)	164	149
Holmer (Mixed)	268	256
,, (Infants)	156.1	128
Roman Catholic (Mixed)	253.5	243
,, (Infants)	108.5	92
St. James (Infants)..	198.4	168
St. Martin's (Mixed)	145	141
,, (Infants)	64	60
St. Peter's (Girls)	252.5	237
St. John the Baptist (Girls).. ..	91.7	86
Scudamore (Boys)	310.9	305
,, (Girls)	211	203
,, (Infants)	232	215
Tupsley (Mixed and Infants) ..	161.2	141
St. Peter's (Infants)	197	171
St. Owen's (Boys)	277	262
	3471.8	3186.7

MEDICAL INSPECTION OF SCHOOL CHILDREN.

At their meeting on January 7th, 1908, the Town Council appointed Doctors Baldock, Collens, Frost, Symonds and Thompson to undertake the work of medical inspection. Dr. Frost discontinued the work on taking up his residence in another locality, and during the last quarter of the year I continued the medical inspection at Holmer Mixed and Infants' Schools. The following are particulars of the number of inspections carried out at the various schools:—

Name of Doctor.	School.	Number of children examined.	Total.
Baldock	Roman Catholic .... (Mixed & Infants)	140	
	Blue Coat—(Boys) ..	42	
	(Girls) ..	56	
	All Saints' (Infants)	70	308
Collens	St. Owen's (Boys) ..	107	
	St. Peter's—(Girls) ..	116	
	(Infants)	57	280
Frost	Holmer—(Mixed) ..	162	
	(Infants) ..	106	268
Symonds	St. John's (Girls) ..	50	
	St. James' (Infants)	88	
	Tupsley .... (Mixed & Infants)	75	
	St. Martin's ...... (Mixed & Infants)	72	285
Thompson ..	Scudamore—(Boys)...	122	
	(Girls) ..	71	
	(Infants)	110	303
Miller	Holmer—(Mixed) ..	109	
	(Infants) ..	70	179
		Total	1623

The total number of children examined during the year ending Dec. 31st was 1,623. (None were examined during January, 1909.)

Particulars in regard to the number at different ages were obtained in regard to 1,572 children who were measured. These numbers are as follows :—

Age ..	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Number	1	106	139	177	123	177	187	120	91	73	136	204	34	4

Age periods.	*Number.*	*Percentage of total.*
Under 5 years	246	15.7
5-10 years	784	49.8
10 and over	542	34.5
Total	1572	

The following table gives the average height and weight at different ages, compared with the average obtained from the figures relating to males and females given by the anthropometric committee in 1883 :—

YEARS OF AGE.	No.	Average Weight.		Average of Anthropometric Committee's figures in pounds.	No.	Average Height.		Average of Anthropometric Committee's figures in inches.
		Pounds.	Kilograms.			Inches.	Centimetres.	
3	95	32.8	14.9	32.7	106	36.2	92.0	36.5
4	132	35.3	16	36.5	139	39.0	99.0	39.5
5	152	36.9	16.7	39.5	177	41.1	104.4	39.5
6	115	43.4	19.7	43.1	123	43.9	111.5	42.5
7	174	47.6	21.6	48.6	177	45.9	116.6	45.0
8	186	49.8	22.6	53.5	187	47.4	120.4	46.7
9	115	55.4	25.1	58.0	120	49.4	125.4	49.2
10	81	59.1	26.8	64.7	91	51.5	130.8	51.3
11	66	67.4	30.6	70.0	73	52.2	132.6	53.2
12	131	73.4	33.3	76.6	136	56.1	142.3	55.2
13	202	77.6	35.2	84.7	204	56.9	144.5	57.3
14	35	81.9	38.2	94.3	34	59.0	149.8	59.5
15	4	99.3	44.9	104.5	4	60.9	154.6	61.6
	1488				1571			

The accompanying tables give the weights and heights of 228 boys attending the Blue Coat School, St. Owen's and Scudamore Schools, and of 286 girls attending the Blue Coat School, St. Peter's Council, St. John's and Scudamore. The children were weighed and measured in their shoes, with the exception of Scudamore, St Owen's, and St. Peter's Girls'. Comparisons are made with the anthropometric committee's figures published in 1883 of average height without shoes and average weight with clothes of all classes (town and country) of the general population of Great Britain. In addition, a list of heights and weights of children attending certain London Elementary Schools in 1905 (9,834 boys and 8,852 girls) is also given; the children were measured without shoes.

HEIGHTS.

Years of Age.	City of Hereford.			Anthropometric Committees: Figures in inches.	London Children.
	Number at each Age.	Inches.	Centimetres.		Centimetres.
Males.					
6	4	45.5	115.5	43	..
7	40	46.2	117.4	46	116
8	46	46.1	117.1	47	120.5
9	26	48.5	123.2	49.7	125.2
10	9	50.5	128.2	51.7	129.8
11	11	55	139.7	53.5	134.3
12	33	55.2	140.2	55	138.7
13	79	55.8	141.7	57	143.3
14	19	59.3	150.6	59.2	148.3
15	2	59.8	151.9	62.2	..
Females.					
6	5	47.1	119.7	42	..
7	37	46.1	117.1	44	115.4
8	55	47.5	120.6	46.5	120.4
9	37	48.8	124	48.7	124.7
10	22	50.4	127.8	51	129.9
11	9	54.2	137.7	53	135.0
12	49	56.9	144.5	55.5	140.6
13	63	57.3	145.6	57.7	146.7
14	9	58.4	148.3	59.7	152.4
15	..	..	..	..	..

WEIGHTS.

Years of Age.	City of Hereford.			Anthropometric Committee's Figures in pounds.	London Children.
	Number at each Age.	Pounds.	Kilogrammes.		Kilogrammes.
Males.					
6	4	50.3	22.8	44.5	. .
7	40	48.25	21.8	49.7	22.02
8	46	48.8	22.1	55	23.47
9	26	54.8	24.8	60.5	25.46
10	9	58.9	26.7	67.5	27.59
11	11	71.7	32.5	72.0	29.95
12	33	74.1	33.6	76.7	32.46
13	78	74.9	34	82.6	36.40
14	19	76.3	34.6	90.8	39.23
15	2	96.2	43.6	102.7	. .
Females.					
6	5	42.4	19.2	41.7	. .
7	37	46.7	21.2	47.5	21.2
8	55	48.9	22.2	52	22.92
9	37	53.4	24.2	55.5	25.9
10	22	58.9	26.7	62	27.17
11	9	68.1	30.9	68	29.87
12	49	73.7	33.4	76.5	33.32
13	63	77.8	35.3	87	33.71
14	9	78	35.4	96.7	41.80
15	. .	. .	. .	106.2	. .

HEIGHTS.—The boys in the Hereford schools at ages 8, 9 and 10 years are not so tall as the boys examined in the London schools; at ages 11 years and upwards they appear taller. On the whole the figures compare favourably with those of the anthropometric committee. The girls in the Hereford schools at ages under 10 years are practically the same as the girls in the London schools, and they appear taller at age 12 and not so tall at ages 13 and 14 years. At ages 6 to 13 years the heights are greater than the anthropometric committee's figures.

Taking larger numbers and comparing with the average for boys and girls, one finds that the heights of Hereford children are lower at ages 11, 13, 14 and 15, and higher at ages 3 to 10 than those given by the anthropometric committee.

WEIGHTS.—The boys in the Hereford schools at ages 7, 8, 9, 10, 13 and 14 appear to be not so heavy, and at ages 11 and 12 heavier than the London boys.

The girls in the Hereford schools at ages 7, 8, 9, 10 and 14 appear to weigh less, and at ages 11, 12 and 13 more than the London children.

In both sexes the weights do not come up to the anthropometric committee's figures, and this is also borne out by the larger figures of Hereford children, the weights being less at all ages, except 4 and 6 years.

NUTRITION.—On the whole the children were well nourished, in 57 instances, *i.e.*, 3.5 per cent., the children were below normal.

CLEANLINESS.—The bodies were dirty in 22 instances and there were 96 verminous heads, 5.9 per cent. In fairness to the other children attending the school, children with such heads should be excluded until quite free from vermin. The visit of a nurse to such houses and a few minutes practical instruction would have a good effect. It is important that each child should have its own numbered peg in the cloak-room.

CLOTHING.—In 34 cases the clothing was ragged, torn and unsuitable, and in 59 cases the boots were worn and needed mending. Some boots could be mended, others were beyond repair. It is important that children should be properly shod; colds, bronchitis and other ailments arise through wet feet.

PREVIOUS INFECTIOUS DISEASE.—Particulars were ascertained in 1,354 cases. The particulars are as follows :—

Previous disease.	Number.	Percentage.
Measles	999	73.7
Whooping Cough..	482	35.6
Chicken-pox	274	20.2
Scarlet Fever	82	6.0
Diphtheria	54	3.9

The larger proportion had previously suffered from measles. A fair proportion, 35.6 had suffered from whooping cough, about one-fifth from chicken-pox and only a very small proportion from scarlet fever and diphtheria. About a third had suffered from both measles and whooping cough. The large number of children who had previously had measles would be partly accounted for by the severe epidemic of measles during 1907.

TEETH.—In reference to 1,176 children, the number of defective teeth was stated and the particulars are set forth below. In regard to the remainder, the condition was referred to as good, fair, or bad: in the majority of cases the condition was fair.

Number of carious teeth.	No. of children	Per cent.
1	122	10.4
2	151	12.8
3	119	10.1
4	148	12.6
5	92	7.8
5–10	247	21.0
10 and over	91	7.8
No carious teeth	206	17.5
Total	1176	100.0

The children examined were at all ages from 3 years upwards, and of the 206 children who had no carious teeth, probably one-third were young children. The table shows that the large majority of the children had from 1 to 14 decayed teeth.

In three cases there were abscesses in the neighbourhood of the affected teeth. The presence of such teeth is from a health point of view very undesirable, as various bad effects follow, *e.g.*, ulcers in the mouth, dyspepsia, etc. Where there are a large number of unsound teeth in the mouth the general health is lowered and anæmia not uncommon.

Children should be instructed in the use of the tooth-brush. The teeth should be cleaned before retiring to rest, and some simple antiseptic powder used. In the case of young children parents sometimes make the excuse that it does not matter about the teeth and there are more to follow; this is a mistaken idea, as carious temporary teeth may start infection in the permanent teeth.

OTHER DISEASES AND DEFECTS.—The accompanying table shows the various defects found among the 1,623 children examined.

MEDICAL INSPECTION OF 1,623 CHILDREN.

Disease or Defect.		Number of children affected.	Percentage
Diseases of the Eye :			
Blepharitis	13		
Opthalmia	2		
Other	2		
	—	17	1.04
Defective Vision		*89	9.0
Ear Disease		18	1.1
Defective Hearing		62	3.8
Enlarged Tonsils			
(*a*) Slight		55	3.3
(*b*) Marked		165	10.1
Adenoids		40	2.4
Defects of Speech :			
(*a*) Stammering		8	.49
(*b*) Other		25	1.5
Mental			
(*a*) Defective		7	.43
(*b*) Dull		33	2.03
Deformities		10	.61
Heart Disease			
(*a*) Functional		26	1.6
(*b*) Permanent		6	.37
Respiratory Disease			
(*a*) Bronchitis		10	.61
(*b*) Phthisis		3	.18
(*c*) Suspicious Phthisis		5	.3

Skin Disease		
(*a*) Ringworm	15	.92
(*b*) Other Skin Disease ..	8	.49
Rickets	8	.49
Alveolar Abscess	3	.18
Rupture..	12	.73
Anæmia	10	.61
Tubercular Glands	5	.3
Enlargement of Thyroid Gland	5	.3
Spinal Disease	1	.06
Epilepsy	1	.06
Chorea	1	.06
Other Disease	1	.06

* 985 children examined.

The Eye.—There were 17 cases of external eye-disease, 13 children suffered from blepharitis (inflammation of the eye-lids). These cases could be readily cured under medical advice. Eighty-nine children suffered from defective vision; the majority of the children tested were aged 7 years and upwards. Snellen's test types were used, the distance for reading being 20 feet. Those who could read the letters under D-9 are not included in the above list of 89 children. It is important that children with defective vision should wear suitable spectacles, and neglect to do this often causes the eyesight to become worse. Further reference is made to this matter later.

The Ear.—Eighteen children had a discharge from one or both ears; in three cases the disease was described as otitis media (middle ear disease). Disease of the ear often follows scarlet fever, and it is important that such ears should be attended to and medical advice sought. Deafness invariably accompanies a discharge from the ear. Altogether 62 children suffered from deafness; in some cases this was due to wax in the ear and in other cases to the presence of adenoids or enlarged tonsils.

Enlarged Tonsils and Adenoids.—It will be seen that a fair proportion suffered from one or other of the above; where adenoids were present they were generally associated with enlarged tonsils. Adenoids and enlarged tonsils cause obstruction to the breathing; children so affected readily develop sore throat and nasal discharge is not uncommon. In addition the hearing is affected through blocking of the eustachian tube and if the adenoids and tonsils are not removed at an early period permanent deafness may follow. Children so affected often speak in a nasal tone of voice, and invariably snore loudly at night. They must of necessity breathe mostly through the mouth.

Defect of Speech.—Eight children stammered, the majority rather badly; some had a lisp, and others spoke with a nasal voice already referred to.

MENTAL.—Thirty-three were described as dull, slow, or backward. A certain amount of headway can be made with these. Seven were mentally deficient; such children need special attention.

DEFORMITIES.—There were two cases of wry-neck; the remainder suffered from curvature of the spine, anterior or lateral.

HEART DISEASE.—There were only six cases of permanent heart disease. In 26 there was either dilatation accompanying general anæmia, nervous irregularity, or hypertrophy. In regard to the functional disease, a cure could be effected by medical treatment, and much good advice given in regard to the 6 permanent cases of the disease.

RESPIRATORY DISEASE.—There were several cases of consumption and a few suspicious cases. It is important that these cases should receive medical attention.

SKIN DISEASE.—It is essential that children with ringworm should be kept from school until the disease has entirely disappeared. The remarks I have already made in regard to the desirability of each child having its own hat-peg especially apply in view of the presence of ringworm among school children.

RICKETS.—The Hereford children are comparatively free from this disease, which is caused by improper feeding during the first nine months of life. Fortunately the mothers are not employed in industrial occupations, and can devote the proper attention to their children.

TUBERCULAR GLANDS.—In children tubercular disease commonly arises from infection in milk. I have already referred to this matter in an earlier part of this report in connection with the milk supply. Insanitary surroundings and insufficient food lower the vitality, and also predispose to the disease.

RUPTURE.—It is important that either these cases should be treated by operation, or that a truss should be worn.

GENERAL REMARKS.

Written notice was generally given to the parents of the date and hour of the medical examination; in some cases verbally through the children.

In the case of the younger children, notice was sent through an elder brother or sister, or a note was fastened to their clothing. Only a small proportion (from one quarter to a third) of the parents attended.

The parents were informed of any defects, either personally or through their children. In future a written communication will be sent to the parents who were not present at the examination, where any defects are found, and they will be recommended to seek medical advice.

The majority of the ailments can be treated by the medical practitioner, and the family medical attendant is the one to advise in regard to treatment, &c.

Some provision may have to be made in the future in regard to special diseases, *e.g.*, of the eye or ear ; more especially in regard to testing the eye-sight and the fitting of spectacles.

Children with defective vision need spectacles, and it is important they should have them. In regard to verminous heads and minor ailments, where the parents are unable to provide medical assistance, there is useful work for a school nurse.

The work of medical inspection was carefully carried out and a large amount of time spent, the average time taken for each examination including the weighing and measuring, was about 10 minutes.

The teachers heartily co-operated in the work, and gave useful assistance in the weighing and measuring of the children.

I am, Ladies and Gentlemen,
Your obedient servant,
J. W. MILLER,
Medical Officer.

TABLE I. (L.G.B.)

HEREFORD URBAN DISTRICT.

Vital Statistics of Whole District during 1908 and previous years.

Year.	Population estimated to middle of each year.	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	Nett Deaths at all Ages belonging to the District.	
				Under 1 Year of Age.		At all Ages.						
		Number.	Rate.*	Number.	Rate per 1000 Births registered.	Number.	Rate.*				Number.	Rate.*
1	2	3	4	5	6	7	8	9	10	11	12	13
1898	21140	544	25·7	72	129	364	17·2	62	27	6	343	16·2
1899	21250	519	24·4	76	146	384	18·0	78	39	12	357	16·8
1900†	21270	512	24·7	67	130	394	18·5	73	28	8	374	17·6
1901	21400	496	23·1	64	129	379	17·7	90	39	5	345	16·1
1902	21550	526	24·4	58	112	362	16·7	70	27	9	344	15·9
1903	21700	564	25·9	78	138	388	18·1	82	40	5	353	16·2
1904	21900	489	22·3	61	124	355	16·0	101	33	9	331	15·1
1905	22050	525	23·8	41	78	345	15·6	85	39	4	310	14·05
1906	22200	479	21·5	69	144	376	16·9	84	41	7	342	15·4
1907	22350	536	23.9	51	95	351	15·7	86	41	11	321	14·3
Averages for years 1898-1907	21681	519	23·9	63·7	122	369	17·0	81·1	35·1	7·6	342	15·7
1908	**22358**	**482**	**21·5**	**46**	**95**	**349**	**15·6**	**92**	**30**	**10**	**327**	**14·6**

* Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population.

† This estimate of population for the year 1900 is calculated upon the withdrawal of Reserves, Militia, and Volunteers to South Africa.

NOTES.—(a)The deaths included in Column 7 of this table are the whole of those registered during the year as having actually occurred within the district, including citizens who have died in the Lunatic Asylum. The deaths included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

(b)By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

I.	II.	III.
Institutions within the District receiving sick and infirm persons from outside the District.	Institutions outside the District receiving sick and infirm persons from the District.	Other Institutions the Deaths in which have been distributed among the several localities in the District.
Workhouse. Herefordshire General Hospital.	Lunatic Asylum.	Isolation Hospital.

Area of District in acres (exclusive of area covered by water).	5,031	Total population at all ages,	21,382	At Census of 1901
		Number of inhabited houses,	4,565	
		Average number of persons in each house	4·68	

TABLE II. (L.G.B.)

HEREFORD URBAN DISTRICT.

Vital Statistics of Separate Localities in 1908 and previous years.

NAMES OF LOCALITIES.	WHOLE DISTRICT.				LEDBURY WARD.				LEOMINSTER WARD.				MONMOUTH WARD.			
YEAR.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
	a	*b*	*c*	*d*	*a*	*b*	*c*	*d*	*a*	*b*	*c*	*d*	*a*	*b*	*c*	*d*
1901 ..	21400	496	345	64	8211	182	122	26	7935	193	140	24	5254	121	83	14
1902 ..	21550	526	344	58	8259	186	125	24	8008	221	137	22	5283	119	82	12
1903 ..	21700	564	353	78	8313	208	132	25	8073	229	137	38	5314	127	84	15
1904 ..	21900	489	331	61	8408	177	125	23	8148	204	116	22	5344	108	90	16
1905 ..	22050	525	310	41	8456	183	116	16	8238	248	118	14	5356	94	76	11
1906 ..	22200	479	342	69	8503	181	129	32	8316	195	135	22	5381	103	78	15
1907 ..	22350	536	321	51	8577	193	105	17	8371	216	141	21	5402	127	75	13
Averages of 7 Yrs. 1901 to 1907	21878	516	335	60	8389	187	.122	23	8155	215	132	23	5333	114	81	14
1908	**22358**	**482**	**327**	**46**	**8548**	**154**	**129**	**17**	**8404**	**218**	**126**	**18**	**5406**	**110**	**72**	**11**

NOTES.—(*a*) Deaths of Residents occurring beyond district are included in sub-columns C of this table, and those of non-residents registered in the district excluded.

(*b*) Deaths of residents occurring in public institutions are allotted to the separate wards according to the addresses of the deceased.

TABLE III. (L.G.B.)

HEREFORD URBAN DISTRICT.

Cases of Infectious Disease notified during the Year 1908.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.							TOTAL CASES NOTIFIED IN EACH WARD.			NO. OF CASES REMOVED TO HOSPITAL FROM EACH WARD.			
	At all Ages.	At Ages—Years. Under 1.	1 to 5	5 to 15	15 to 25	25 to 65	65 and up-wards	Ledbury Ward.	Leominster Ward.	Monmouth Ward.	Ledbury Ward.	Leominster Ward.	Monmouth Ward.	Total cases removed to Hospital.
Small-pox ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria (including Membranous Croup) ..	26	1	7	13	4	1	..	11	12	3	1	2	2	5
Erysipelas	25	..	2	1	2	19	1	13†	10	2	..	..	..	..
Scarlet Fever ..	58	..	9	40	5	4	..	26	25	7	24	16	5	45
Typhus Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Relapsing Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Continued Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Plague	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	109	1	18	54	11	24	1	50	47	12	25	18	7	50

The Isolation Hospital for Infectious Diseases is in the Parish of Tupsley, in Ledbury Ward, within the Liberties of the City.
The Isolation Hospital for Small-pox is in the Parish of Hampton Bishop, outside the Liberties of the City.
The Workhouse, Prison and the Herefordshire General Hospital are in the Ledbury Ward.
† This includes 3 cases in the Workhouse, 1 in the Prison and 2 in the General Hospital.

TABLE V. (L.G.B.)

HEREFORD URBAN DISTRICT.

INFANTILE MORTALITY DURING THE YEAR 1908.

Deaths from stated Causes in Weeks and Months under One Year of Age.

Cause of Death.		Under 1 Week	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
All Causes	Certified	7	2	..	3	12	5	..	7	5	5	3	I	3	2	..	2	45
	Uncertified										I							I
Common Infectious Diseases	Small-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Chicken-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Measles	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Scarlet Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Diphtheria (including Membranous Croup)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Whooping Cough	..	..	..	..	..	..	..	..	..	..	..	..	..		..	..	..
Diarrhœal Diseases†	Diarrhœa, all forms	..	..	..	..	..	..	..	I	I	..	..	..	2	..	..	..	4
	Enteritis Muco-enteritis																	
	,, Gastro-enteritis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Gastritis, Gastro-intestinal Catarrh	..	..	..	..	..	..	..	..	I	..	..	..	..	..	..	..	I
Wasting Diseases	Premature Birth	4	..	..	2	6	I	..	..	..	..	..	..	..	..	..	..	7
	Congenital Defects	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Injury at Birth	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Want of Breast-milk, Starvation	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Atrophy, Debility, Marasmus	2	2	..	..	4	3	..	4	I	I	..	..	..	..	..	..	I3
Tuberculous Diseases	Tuberculous Meningitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Tuberculous Peritonitis: Tabes Mesenterica	..	..	..	..	..	..	..	..	..	..	I	..	..	I	..	..	2
	Other Tuberculous Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	I	I
Other Causes.	Erysipelas	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Syphilis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Rickets	..	..	..	..	..	..	..	..	..	..	I	..	..	..	..	..	I
	Meningitis (*not Tuberculous*)	..	..	..	..	..	..	..	I	..	..	..	..	..	..	..	..	I
	Convulsions	..	..	..	I	I	..	..	..	2	I	..	..	..	..	..	I	5
	Bronchitis	..	..	..	..	..	I	..	I	..	I	..	..	I	..	..	..	4
	Laryngitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Pneumonia	..	..	..	..	..	..	..	..	..	..	..	..	..	I	..	..	I
	Suffocation, overlying	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	2
	Other Causes	I	..	..	..	I	..	..	..	..	I	I	I	..	..	..	..	4
Totals		7	2	..	3	12	5	..	7	5	6	3	1	3	2	..	2	46

† See Notes to Table IV. (L.G.B.)

District—CITY OF HEREFORD.

Births in the year	Legitimate, **459.** Illegitimate, **23.**	Population (Estimated to middle of 1908) **22,358.**
Deaths in the year	Legitimate Infants, **40.** Illegitimate Infants, **6.**	Deaths from All Causes at All Ages, **327.**

TABLE A.

CITY OF HEREFORD.

DEATHS OF RESIDENTS FROM ALL CAUSES, 1908.

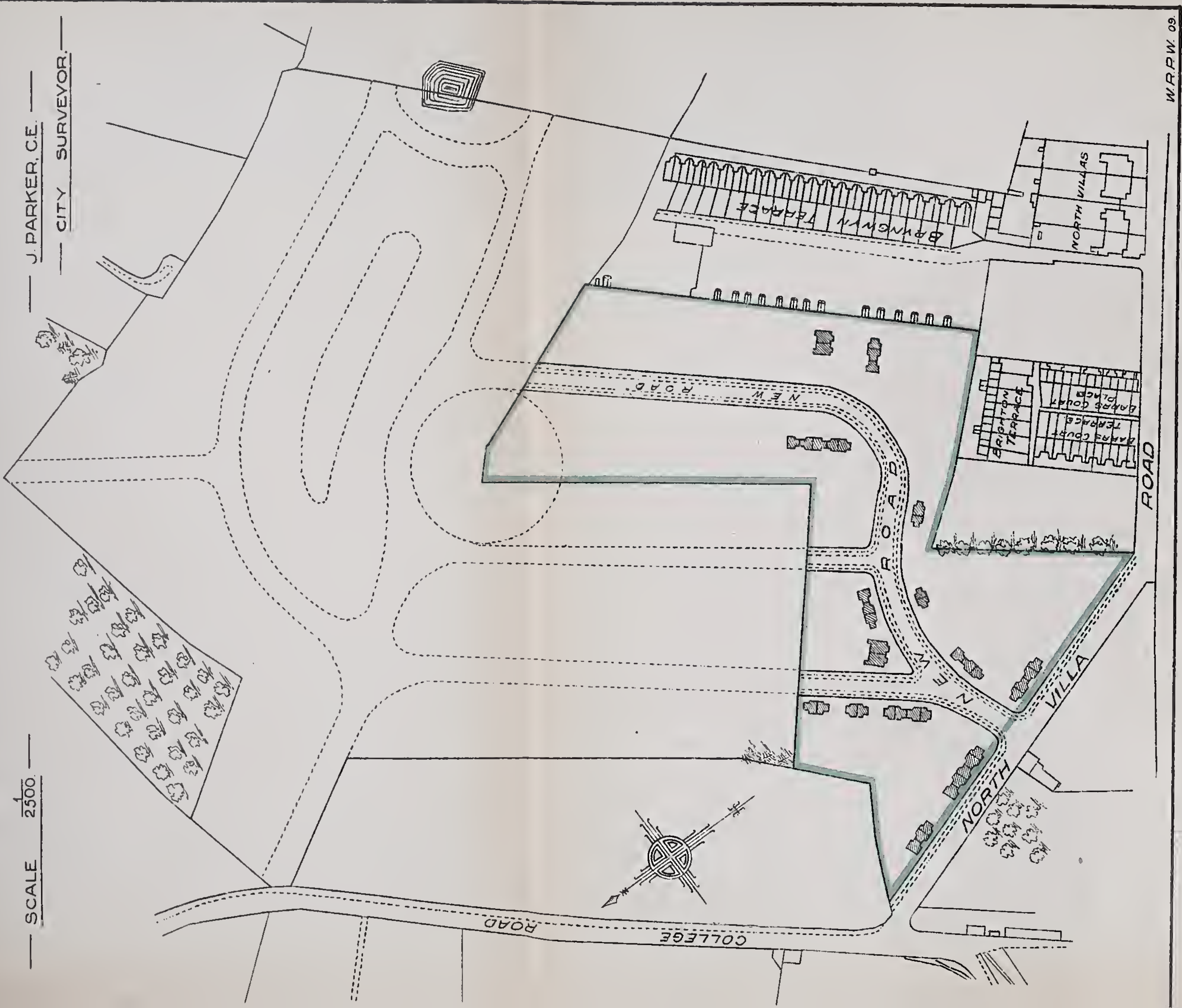
	AGES.													All ages.		TOTAL.	WARDS.		
	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 & up	M.	F.		Ledbury	Leominster	Monmouth.
I. Specific Febrile or Zymotic Diseases	4	10	4			1			2	1	1	1		6	18	24	13	9	2
II. Parasitic Diseases																			
III. Tubercular Diseases	4	7	1	1	3	4	10	5	4	2	1			23	19	42	20	15	7
IV. Dietetic Diseases																			
V. Constitutional Diseases								2	5	9	8	1	1	11	15	26	11	10	5
VI. Developemental Diseases	22	2									11	16	6	33	24	57	17	22	18
VII. Local Diseases	14	11	3		1		4	15	24	29	38	22	7	92	76	168	65	65	38
VIII. Deaths from Violence	2	1	2				1	1			1			3	5	8	2	4	2
IX. Other Causes								1				1		1	1	2	1	1	
Totals	46	31	10	1	4	5	15	24	35	41	60	41	14	169	158	327	129	126	72
I.—SPECIFIC FEBRILE, OR ZYMOTIC DISEASES.																			
1.—Zymotic Diseases.																			
Smallpox																			
Measles		4								1				2	3	5	2	3	
Scarlet Fever			1												1	1			1
Typhus Fever																			
Influenza									2			1			3	3	3		
Whooping Cough		3													3	3		2	1
Diphtheria		1	1											1	1	2	2		
Enteric Fever																			
Diarrhœa	3	2												1	4	5	3	2	
Epidemic or Zymotic Enteritis	1													1		1		1	
2.—Venereal Diseases.																			
3.—Malarial Diseases.																			
Remittent Fever																			
Ague																			
4.—Zoogenous Diseases.																			
Cowpox and Effects of Vaccination																			
Other Diseases, Hydrophobia, Glanders, &c.																			
5.—Septic Diseases.																			
Erysipelas																			
Puerperal Fever																			
Pyæmia, Septicæmia			2			1									3	3	3		
Carbuncle											1			1		1		1	
II.—PARASITIC DISEASES.																			
Thrush and other Vegetable Parasitic Diseases																			
Worms, Hydatids and other Animal Parasitic Diseases																			
III.—TUBERCULAR DISEASES.																			
Tubercular Meningitis (Acute Hydrocephalus)		3							1					2	2	4	1	3	
Phthisis	1	1	1	1	3	4	9	5	3	2	1			19	12	31	15	10	6
Tuberculosis of Intestines (Tabes Mesenterica)	1													1		1	1		
Other forms of Tuberculosis	2	3					1							1	5	6	3	2	1
IV.—DIETETIC DISEASES.																			
Want of Breast Milk, Starvation																			
Scurvy																			
Alcoholism, Delirium Tremens																			
V.—CONSTITUTIONAL DISEASES.																			
Osteo-arthritis (Rheumatoid Arthritis)																			
Rheumatic Fever										1				1		1			1
Rheumatism											2				2	2	2		
Cancer								2	4	6	6	1		7	12	19	7	8	4
Other Malignant Diseases										1			1	1	1	2		2	
Diabetes Mellitus										1				1		1	1		
Pernicious Anæmia									1					1		1	1		
VI.—DEVELOPEMENTAL DISEASES.																			
Premature Birth	7													5	2	7	5	1	1
Debility at Birth																			
Atelectasis																			
Congenital Defects		1													1	1			1
Atrophy, Debility, Marasmus	13	1												11	3	14	3	7	4
Want of Breast Milk																			
Dentition	1														1	1			1
Rickets	1													1		1		1	
Old Age (Senile Decay)											11	16	6	16	17	33	9	13	11
VII.—LOCAL DISEASES.																			
1.—Diseases of Nervous System.																			
Convulsions	5	2												4	3	7	2	3	2
Meningitis	1	1						1	1					2	2	4		2	2
Encephalitis																			
Apoplexy										3	1	3		4	3	7	4	2	1
Hæmorrhage										6	4	2	1	6	7	13	3	9	1
Hemiplegia (Brain Paralysis)									2		1			3		3	1	1	1
Softening of Brain												1			1	1	1		
Cerebral Abscess								1						1		1		1	
General Paralysis of the Insane																			
Other forms of Insanity																			
Epilepsy							1			1				1	1	2		1	1
Paraplegia (Diseases of Spinal Cord)									1	1		1		3		3	1	2	
Other and ill-defined Diseases of Brain or Nervous System										2	2	1	1	1	5	6	2	1	3
2.—Diseases of Organs of Special Sense.																			
Otitis Media. Meningitis		1													1	1		1	
3.—Diseases of Circulatory System.																			
Pericarditis																			
Endocarditis, Valvular Disease of the Heart		1					1	3	6	9	16	8	3	26	21	47	23	14	10
Embolism										1				1		1	1		
Thrombosis											3			2	1	3	1	1	1
Arterio-sclerosis								1							1	1	1		
4.—Diseases of Respiratory Organs.																			
Laryngitis																			
Croup																			
Bronchitis	4	2	1		1				3	1	2	3	1	8	10	18	7	8	3
Pneumonia	1	2					1	5	1	4		1		9	6	15	3	6	6
Pleurisy									1					1		1		1	
Emphysema											2				2	2	1		1
5.—Diseases of Digestive System.																			
Diseases of Stomach	1								3		1	2		5	2	7	2	4	1
Enteritis		1	1				1							1	2	3		1	2
Obstructive Diseases of Intestine		1						1	1					1	2	3	1	2	
Appendicitis			1												1	1	1		
Cirrhosis of Liver									2		1			3		3	1	1	1
Jaundice and other Diseases of Liver													1	1		1	1		
Other Diseases of Digestive System	1														1	1			1
6.—Diseases of Lymphatic System.																			
7.—Diseases of Urinary System.																			
Nephritis									1	1	3			2	3	5	2	2	1
Bright's Disease									1		2			2	1	3	2	1	
Diseases of Bladder								3						3		3	2	1	
Other Diseases of Urinary System	1								1					2		2	2		
8.—Diseases of Reproductive System.																			
9.—Diseases Associated with Childbirth.																			
10.—Diseases of Integumentary System.																			
VIII.—DEATHS FROM VIOLENCE.																			
1.—Accidents or Negligence.																			
Burns		1									1			1	1	2	1	1	
Drowning			1				1								2	2			2
Suffocation	2														2	2	1	1	
Injuries			1											1		1		1	
2.—Homicide.																			
3.—Suicide.								1						1		1		1	
IX.—OTHER CAUSES.																			
Ptomaine Poisoning								1							1	1		1	
General Debility												1		1		1	1		
Totals	46	31	10	1	4	5	15	24	35	41	60	41	14	169	158	327	129	126	72
			11		9		115				115								

CITY OF HEREFORD

BARRS COURT ESTATE

SCALE $\frac{1}{2500}$

J. PARKER, C.E.
CITY SURVEYOR.



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